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June 1993
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Racing Boxform

CLASSIC COLLECTION

MYSTICAL
Mystical

TOP TIPS • FIRST REVIEWS •
BEST ADVICE

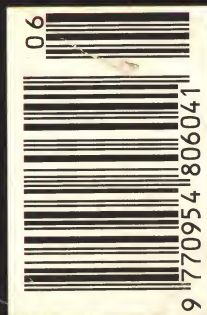


CPC

PLUS

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publication!



Line up

Serious

16 Pen Pad

Amstrad's latest personal organiser recognises your handwriting. But how useful is that, exactly?

19 Technical Forum

It's technical. It's a forum. It's Technical Forum. Everything you need to know on four (yes FOUR) handy pages.

23 Type-ins

Oh my word, it's the type-ins. Love 'em or hate 'em, you just can't use 'em unless you type 'em in. You'd better start now.

28 UAUG - The Interview

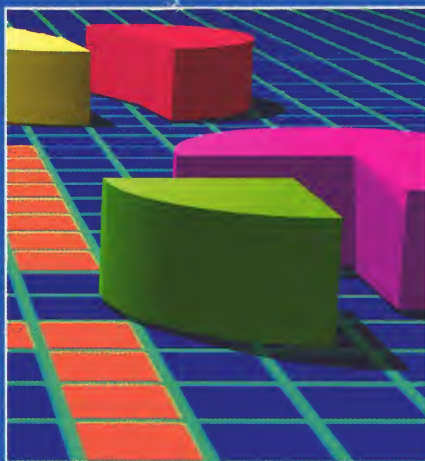
Just who the dickens are those people at the United Amstrad User Group? What do they think? What do they want? Find out.

32 Setting Up A PD Library

More on getting involved in the CPC scene. Find out how you can set up a PD library and make yourself a few bob.

38 Assembly Line

Things are starting to get a bit hairy in the machine code tutorial. This month you can begin work on a Breakout game.



Main feature

11

Creative Counting

Everyone has uses for spreadsheets and databases. You couldn't have been more wrong if you thought business software was dull.

Frivolous

35 Public Image

More public domain software and fanzine news than you can shake a zircon-encrusted stick at, and no mistake.

40 Balrog

It's the end of an era. 'The Balg' (as he rather bizarrely prefers to be known) is bowing out. But it's a corker.

41 Power Up

More old flannel than a frumpy nightie factory. And find out what's in the charts.

42 Super Cauldron

And now, live from page 42, for no adequately explored reason, it's (ta-dah)... AA's first rhyming review (cheers, etc)

46 WWF™ WrestleMania

Licence-ware, eh? Is it, when viewed as part of the Big Picture, a Good Thing? If this one is anything to go by, maybe not.

48 Venture Forth

Your chance (finally) to start work on your own adventure game. No need to learn a new system, either - it's in BASIC.

54 Cheat Mode

Short of getting someone to come round to your house and play your games for you, this is the best way to win without trying.

Regulars

4 Covertape

Instructions aplenty for our great covertape software. If you want to use Racing Boxform or Mystical, then this is the place to find out how.

9 Amscene

Gossip, scandal, and free money. Just three things that aren't in our news pages. Still, there's plenty of news and a nice picture of the Ed. Hurrah.

30 Back Issues

There's more to life than AA, it's true. But a life without a full set of the world's loveliest CPC magazine wouldn't be a complete one. Be complete.

31 Subscribe!

The best way to miss your regularly copy of AA is to fail to go out and buy one. But another really good way of missing out completely is to not be a subscriber.

8 Small Ads

What's this doing here? It should be up there between Covertape and Amscene. You can't even trust some people to put things in simple numerical order. Tch!

51 Reaction

Postman Pat, Postman Pat, Postman Pat and his black and white cat. We love it when Pat comes to visit, he brings loads of your lovely letters with him.

58 Next Month

Surely no one takes any notice of this bit. We haven't got a clue what we're going to do for lunch today, let alone what we're going to put in the mag next month.

CLASSIC COLLECTION

Here comes another one, by crikey! Another fabulous Classic Collection with two ace commercial packages and the winner of our Design an Adventure Game competition.

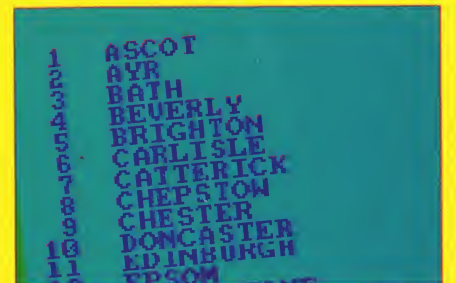
Racing BoxForm

What, do you think, is the most important contribution made by the computer to our society? Could it be the safe and accurate control of all manner of systems, from washing machines to space craft? What about the design of complex objects and structures? Analysis of vast numbers of data that would otherwise have taken thousands of man-hours?

No.

The most important thing the computer has done for us is to make it a little bit easier to guess which horse will win this afternoon's race.

Actually, that's probably not



true, but it's certainly one of the more entertaining things your CPC can do for you.

Whether you're a fan of the sport of kings or you just want to see what all the fuss is about, this little beauty will make the whole thing much more fun than picking winners with an old pin or because you like the name. Mind you, that's not a bad system...

Who's afraid of the Balrog?

Not so very long ago, we ran a little competition in the Balrog adventure column to try to find the best and most entertaining adventure game written using the Graphic Adventure Creator (GAC) that we'd recently put on the covertape.

The winner of the competition was to have their masterpiece slapped on an AA covertape

Entries came flooding in by the sack full, and we looked carefully at them all. Some were good. Some were indifferent. Some were absolutely hideous.

A few were very good, and one, written by the improbably-named Marlon, was very good indeed.

So here, in all its glory, is Marlon's winning game.

Let's get adventuring...

Mystical

Apprentices and trainees can be a bit of a liability. As an apprentice magician, you're a bit useless. So useless, in



fact, that you manage to lose all the Wizard's scrolls and phials and scatter them all over the place. This is considered to be something of a Bad Thing.

What would be best, then, would be if you were to wander through this vertically-scrolling land and collect them all up.

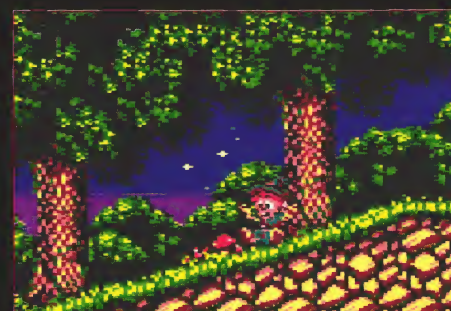
There're instructions aplenty within the game and the consensus is that it's more fun than a particularly amusing thing that decided it was being too serious and tried to lighten up a little.

Jolly well check it out right now - you won't be disappointed.

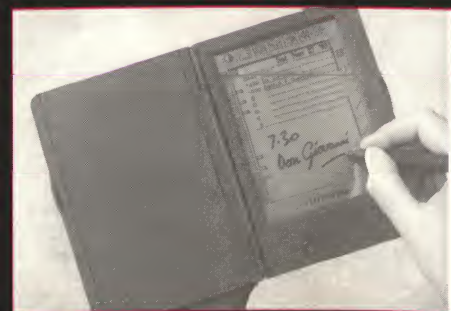
Just turn the page for all the details



Parallax scrolling on a CPC? Yes - page 43.



Witches sliding on their bottoms - page 42.



A fabulous gadget and no mistake - page 16

CLASSIC COLLECTION

Racing Boxform

Simon dons his funny hat and ludicrous sideburns for a day at the races...

Following in the series of serious packages, **AA** brings you a pleasant diversion from the usual run of the mill serious software. It's time for a truly startling departure – horse racing! Hats out! We know as much about horse racing as we do about the films of Ingmar Bergman so it's over to Boxform for the instructions...

The program allows you to weigh up a race quickly by taking into account the various factors involved and allocating points to the horses



It's either an Upper Palaeolithic cave painting or the intro to Racing BoxForm.

Changing The Program

After loading press BREAK. The program may now be amended between the following lines:

- Flat Racing
 - 1300-1490 All races
 - 1600-1790 Non handicaps only
 - 1800-1990 Handicaps only
- National Hunt
 - 200-390 All Races
 - 500-690 Non handicaps only
 - 700-890 Handicaps only

For each of the categories c\$ gives the name and t the number of points to be added (a minus quality results in the points being deducted). Line 600 for example causes Top

Rated to be displayed and allocates 5 points to every horse entered in this category. N.B. c\$ must not be more than 10 characters long.

To delete a category simply type its line number and press RETURN. To add a category enter a new line within the limits shown above. For example, if you wished to allocate 4 points to every horse that had won over the same distance as the race under review you could enter:

1400 LET c\$="DIST WNR":LET t=4:GOSUB 6000

for flat racing or:

280 LET c\$="DIST WNR":LET t=4:GOSUB 6000

for national hunt.



ENTER race identifier
Up to 6 characters eg.
? 245Nm

Hours of fun for all the family. Choose a race and get your CPC to guess the winner.

Crse Wnr – Newspapers indicate horses which have previously won on the course but it would also be reasonable to include horses which are known to have given a good performance without actually winning or who have performed well on a similar track.

1st Time – Horses without a previous race in the current season are those whose form figures (shown to the left of the horse) end in - or /. For example 23060-. 11/, 1- etc.

Up To 7EX and 8+ EX – Horses often run in handicaps before their official handicap is changed to allow for a previous win. To compensate for this they are given a penalty of a few pounds extra weight. Because these horses are fit and producing their best form they often defy this penalty and win again.

Starting Price Forecasts given in newspapers are also included – they give an idea of how the 'experts' view the horses' chances.

MENU

- 1 FLAT RACING
- 2 NATIONAL HUNT
- 3 BEST OF THE DAY

PLEASE PRESS NUMBER REQUIRED

As with all the best programs, there are loads of simple menus to guide you.

NB: Make sure the line number you choose is not already in use for a category you wish to keep.

The Going

Although the going is an important factor in weighing up a race it is not included in the program for two main reasons.

- 1 – A horse's past record on different going is not widely available in the popular press, a fact that could be disconcerting to many users.
- 2 – It is difficult to be quantitative about the various possibilities especially when the official going is often not backed up by subsequent time figures.

There are a few points we should like to make, however:

- No horse is inconvenienced by good going, it is just that some can cope with adverse conditions better than others. To state that a horse 'acts on good going' is about as informative as 'runs well on four legs'.
- If a horse is known not to act on a particular going then leave it out of your calculations.
- Known mudlarks are probably at least 7lbs (points in the program) better on soft going. When the going becomes heavy they can be allowed 10lbs or even more over long distances.

Course Winners

You'll notice that in this category the value of 't' is not made equal to a number. This is because the value of a previous course success depends largely on the nature of that course. The points allocated follow the course names in lines 1020 and 1030 for the flat and in lines 110, 120, and 130 for National Hunt racing. These lines may be altered if you want to allocate different amounts.

The Draw

The effect of the draw in flat racing is comprehensively covered by the program but as so many variables are involved it is not feasible to deal with amendments. Should you wish to disregard the draw altogether however you can do so by entering the line:

1065 GOTO 1280

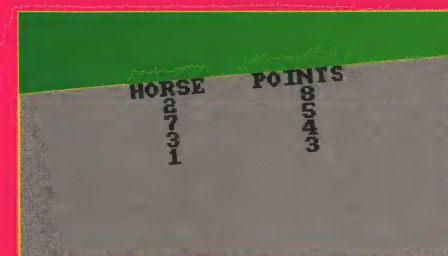
Finally, having amended the program to suit your own requirements save it on the reverse of the disc (or remove write protection) using save "name". The instruction run "name" will run your program when required.

Other Factors

There is complete agreement amongst those engaged professionally in racing that the main points to consider when assessing a horse's chances are its basic ability (form rating) and its suitability to track, distance and going.

There are many more factors ranging from the sensible to the bizarre and when it comes to producing figures to justify their actions, racing enthusiasts vie with the politicians.

Some of the more widely used factors are discussed here but we don't wish to be dogmatic. There are those who will disagree and it's for exactly that reason that the program is designed for individual choice.



The horse with the most points is the one the program thinks is most likely to win.

RACE COURSES	
1 ASCOT	18 L1
2 Ayr	19 L1
3 BATH	20 NE
4 BEVERLY	21 NE
5 BRIGHTON	22 NE
6 CARLISLE	23 NO
7 CATERICK	24 PO
8 CHEPSTON	25 RE
9 CHESTER	26 RI
10 DONCASTER	27 SAI
11 EDINBURGH	28 SAI
12 EPSOM	29 TH
13 FOLKESTONE	30 WAR
14 GOODWOOD	31 WIN
15 HAMILTON	32 WOL
16 HAYDOCK	33 YAR
17 KEMPTON	

The program is packed with information on all the major UK racecourses. Naturally.

Jockeys – To blindly add points simply because a horse is ridden by a top class jockey is a waste of time. The chances are the horse was ridden by the same jockey or one of equal merit on previous outings so how can it make any difference? If a top jockey has been specially booked for a particular ride then that's a different matter and should certainly be considered, as should a very good apprentice who, although still claiming a weight allowance, is riding as well as an experienced jockey.

Trainers – Some punters try to find trainers for courses. There is no logical reason why horses from one stable should be better suited to any particular course and it is usually found that a trainer has most winners at his local track. The reasons for this are fairly obvious. His percentage winners (strike rate to use the jargon) is often lower on such tracks. The reason for this is that owners, not unnaturally, like to see their horses run locally. Trainers are therefore encouraged to enter more horses than they would like in races which are not always suitable.

Then there's the 'trainers in form' syndrome. What this usually means is that the trainer is having a good run of luck just as punters, jockeys, card players or anyone else for that matter, have their good and bad times. There is no way of knowing if he is in the middle or at the end of this run and Murphy's Law dictates that he comes to the end as you start backing him. If only there was a way of knowing when his run was about to start! It has been suggested that this phenomenon is due to the trainer bringing his horses to peak fitness which implies that for the rest of the season they are somewhat below

Don't just sit there looking lost – read the instructions.

Just pop the tape into your machine, making sure it's rewound to the start of Side 1, and then press CTRL + ENTER (or type RUN""), then press any key and the tape will start loading.

Within a few moments you get a menu screen. Choose the program you want using the Spacebar, then hit the RETURN key.

● Note that none of the programs need be loaded directly from the main menu. They can all be run from BASIC. The menu lists them, but you must quit back to BASIC to run them. (Use the RUN"(filename)" command.)

● If you have a disk drive either built into your machine or plugged in, you will first have to type ltape to switch the computer to tape loading. You get the l character by pressing SHIFT+@. Then just proceed as normal.

Oh no, it won't work!

We go to great lengths to make sure that our covertapes work properly. However, if you still have difficulty, try this:

- Loading at several different volume levels (if you're using an external tape recorder) ● Cleaning the tape heads. This can be done with any commercially available cleaning kit ● Adjusting the cassette recorder's head alignment. The alignment screw is located just to the left of the tape head, and is usually accessible through a small hole. Turn it a fraction at a time with a jeweller's screwdriver. When the crispest sound is heard, the alignment is spot on. ● Tapping the cassette gently against a table edge – the spools may be sticking or jammed.

If you still can't get the tape to load then send the tape, along with a brief description of the problem and a stamped sae to:

AA93 Covertape Returns, Ablex Audio Video Ltd, Harcourt, Halesford 14, Telford, Shropshire TF7 4QD

So, you'd like to have it on disc, eh?

The covertape contains its own tape-disc copying program. To transfer the programs to tape, simply follow the instructions on the tape.

- 464 owners with external 3-inch drives will have no problems, but 6128 owners will need a cassette player with a REM socket. Stopping and starting the tape manually is difficult.
- 6128 Plus owners who've had their machines modified to load from tape can transfer the programs to disk, but must rewind to the start of the tape again before the transfer starts.

You can also order a disk version of the covertape from our duplicators, Ablex. Snip off the coupon on the corner of this page and send it with a cheque/PO for £2.00 to:

AA93Disk Offer, Ablex Audio Video, Harcourt, Halesford 14, Telford, Shropshire TF7 4QD

Please don't return tapes to the AA office. Thanks

Disk 93 Token

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AMSTRAD 464 with £100 worth of software, joystick and TV modulator. Will sell for £70. Phone Ben on **0252 330966** 4pm-9pm.

AMSTRAD 6128+, colour monitor, colour printer, boxed, dustcovers, excellent condition, multiface-2, over 80 games, magazines, word processor, DTP, mouse, art package, educational etc. Worth almost £2000, accept £700. Phone **061-861-8312.**

DDI-1 DISK DRIVE £70. CPC 464 with colour monitor £100. AA magazines 65-89 and loads of games 50p-£2 each. Please phone Richard for details on **0295 258774** evenings.

LARGE SELECTION of Amstrad games for CPC 464 tapes for sale. Write for list to **Paul Ratcliffe, 6 Sunnyside Drive, Clarkston, Glasgow** or phone **041 638 1349.**

CPC 6128 colour monitor, TV receiver, printer, joystick, user/language books, electronic pack, tape leads, £300 worth of games, Mini Office II. Excellent condition £400 ono. Phone Kevin on **0472 351934.**

AMSTRAD CPC464 computer with colour monitor. Reason for sale outgrown, two years old. With dust covers and games 50+. Immaculate condition £250. Call **0255 436677.**

150 BUDGET TAPES, 157 full price tapes including compilations, 10 full price disks including compilations, hardware including Multiface II and Insider. Worth over £2,000 will sell all for £800 ono. Tel **0259 721398.**

AMSTRAD CPC 6128 colour monitor modulator, built in disk drive, joystick, tape and disk games. Brilliant condition, only £220. Also some serious software. Tel **061 439 7504.**

AMSTRAD CPC 464 64K cassette and green monitor 227 games, including Robocop, Platoon, Gyrzor and more. Buyer must collect £300 ono. Phone **0553 769925** after 6pm ask for Andy.

AMSTRAD 6128 Colour monitor, cassette player + lead, quen-data printer, joystick, manual, games + office software on disk + tape A/A + ACY mags £220 ono + p+p. Tel **0582 606888.**

AMSTRAD 464 PLUS with mono-monitor, some tape games and AA mags. Unwanted gift, will sell for £80 or lower. Quick sale! Contact Mark **0383 512988.**

SINCLAIR QL with microdrives and a printer (needs a little attention). Excellent condition, must go, £100 or less. Great Bargain. Contact Mark on Tel **0383 512988.**

AMSTRAD CPC 464 with colour monitor DD-1 disk drive, TV tuner, Multiface 2, 100+ games on tape & disk, books etc. Excellent condition £400. Tel **0406 34 263.**

AMSTRAD CPC 464 with green screen monitor, two joysticks about 30 top games, very good condition, still boxed. The price only £100 ono. Bargain! Ask for James, Tel **0203 318393.**

CPC 464, green with TV modulator, joystick, books, loads games, spare keyboard, special offer only £100 (now got 6128). For more info call Simon on **05242 71938.**

6128 COMPLETE PACKAGE 3.5" drive Brunword, Infocript, ROM, games, Foreign Language, 3 disks, Lemmings, many blank 3" disks, spare leads, spare MP2 modulator. £200 the lot or VNO. Phone **0273 514740.**

THE PERFECT first home computer, excellent condition, CPC 6128, colour monitor, Multiface 2, Stop Press, OCP, ArtStudio, mouse, joysticks, Brunword, Top title games and more! Worth £700. Bargain £220 ono Tel **0582 606339.**

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TUCK PD - for a stock list send an SAE to **Matthew Tuck, 15 Ravencar Road,**

Eckington, Sheffield S31 9GJ. Also loads of non-PD software (2nd hand) for sale.

MAGAZINES: AA 59-90, ACV May 1988-May 1992. Superb condition 70p each / £1 with covertape. Also lots of games. Send SAE for list **P Jones, 4 Darley Gate, Eastbourne, E Sussex BN20 7UT.**

AMSTRAD CPC 464+ with colour monitor, 8 games, with manual, 9 months old. £230 ono Tel **0369 5760** after 6pm.

AMSTRAD 464, colour monitor, disk drive, joystick, manual, 87 games, disks and tapes, good condition. Worth £300, will sell £175 ono. Call Daniel Dorrington **0407 831425** after school times.

AMSTRAD CPC 6128 green monitor, manual, systems, disks, cassette recorder, leads, joysticks, games on disk and cassette, £100. Yamaha Portasound PSS790, Keyboard, stereo, 100 voices, 50 rhythm, 8 drum pads, "midi" connectors, song memory, auto accompaniment £150 Tel **0943 601628.**

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CPC 464 COMPUTER £65, colour monitor £75, dot matrix printer £95, light pen, £7.50, music machine £35, or the lot £250. Everything in perfect condition. Phone Martin after 4pm on **091 373 2940.**

CPC 6128+ Excellent condition, cartridges, games (on disk), serious software (on disk), portable computer desk, old AA's programming books. Everything must be sold! Quick sale! Price suggestions welcome. Tel **0865 863177** ask for Brian.

AMSTRAD ACTION cover tapes numbers 3-5 & 12-22, 50p each. Send a SAE with money/cheque payable to **Alan Archer, 21 Vandyck Ave, Keynsham, Bristol BS18 1LE.**

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AMSTRAD 464 PLUS with stereo, colour monitor, joypad, magazines, games manual. Perfect condition, bargain at £180 including postage, still boxed. Phone **0639 639040.**

NINTENDO GAMEBOY cartridge for sale. Bart Simpson Escape from Camp, Deadly is the Game. The price is only £15, but best offer might be accepted. Contact **E Reid, 18 Glenfarg Crescent, Bearsden, Glasgow G61 2A1V.**

6128 COLOUR, zillions of games (tape/disk), multiface, second drive, AA's 1-88, mouse, lightpen, Artstudio, Music System, Sprites Alive, Rombox, Protex etc. DMP 2000, tape deck, Masterfile, Supercalc 2, Soft 968, Pascal. £275??? Phone Nicholas **0228 28760.** Might deliver.

CPC 6128 colour monitor, mouse, Midi Interface, Miditrack, Performer, Mini Office II, Lightpen II, Protex, Stop Press, Desktop Publisher, Trivial Pursuit, games, disks. All mint condition. £395 ono. Phone **06977 47073.**

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DISK GAMES for sale. Back to the Future 2 £9.95, Dun Darach £4.95, The Armageddon Man £4.95, also all three for £14.95. **Richard Bannister, 76 Stillorgan Wood, Stillorgan, Co.Dublin, Ireland.**

AMSTRAD CPC 464 includes colour monitor, keyboard, joystick, 70+ games, AA mags with covertapes, manual, dust-covers and DD1 disk drive. Total bargain £150. Buyer collects. Tel **0706 371477.**

AMSTRAD COMPUTER for sale. Business, educational and many games software. Complete with colour Amstrad monitor, keyboard and printer. Outstanding printouts. Worth £1300. Sell for £350 ono. Phone Chris **0256 469692.**

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DKTRONICS 64K memory and 64k silicon disk, plus manual £35. Also Multiface II and manual £20. AA nos 64-87 in AA binders £20. Phone Brian on **0425 477229.**

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SALE Multiface £15, Amstrad £5, ROM board £10, Speech Synthesiser £13, AMX Mouse, Art, Stop Press £35, second 3.5" disk-drive £20. Tel **0226 204490** after 6pm. Ask for Lee.

CPC 6128 colour monitor, Multiface, manuals, Bonzo Utilities, Mini Office, Fun Schools 1,2,3 & 4. Lots of games & disks. £250 or best offer. Phone **0248 713790** (Anglesey).

6128 PLUS computer, modulator, 2nd drive 3.5", loadsa software, 200ish-magazines, books etc. Over £700 worth. Will sell for £200 ono. Tel **0463 791641** after 6 pm. Ask for Robin.

AMSTRAD CPC 6128 with CTM 644 monitor, fun School and other games. Disk drive needs attention, hence bargain price of £60. Phone **0795 531220** (Faversham).

AMSTRAD CPC 464 PLUS with 72 games and black & white monitor. Will swap for Sega Megadrive or nearest offer. Tel **0646 868922.**

COLOUR MONITOR, CWTA, ACU, Amix, magazines, Level 9 Adventures & others, loads of games on tape, disk on £1, speech synth, Elite, Chuck, Yeagers, mono monitor, Sprites, Alive, Stop Press. Tel Wayne **0532 572154.**

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AMSTRAD ACTION magazines number 16-88 £2 each most with cover tapes where applicable. Reduction for multiple orders. AA binders £4.50 each or £2.50 each with 12 issues of AA. **Ken Dunn, 4 Nairn Way, Grimsby, South Humberside DN34 5AU.**

AMSTRAD CPC 6128 colour monitor, Multiface II, tape and disk software, Mini Office 2, Money Manager, OCP Art, score of recent games and magazines. Bargain £175 ono. Phone David **081 979 1992.**

AMSTRAD 464 with colour monitor, disk drive, joy stick and many games. Also Mini Office II, manuals included. £200 ono. Tel **0392 438477.**

AA'S FOR SALE issues 3-31 and 42-87. Phone Derek on **0292 311333.**

CPC 6128+. Excellent condition, cartridges, games, serous software (on disk), DMP 2000, portable computer desk, old AA's, programming books. Everything must be sole. Quick sale. Price Suggestions welcome. Tel Brian on **0865 863177.**

ORIGINAL SOFTWARE with manuals including Mini Office II, Deypac80, plus tape games at £2 each including postage. For full list tel **0446 736529** after 6pm.

AMSTRAD CPC 464 for sale with colour monitor, over 70 games worth £450. Joystick boxed, magazines & manual will sell for £100. Call after 4pm, weekdays Birmingham **742 9580.**

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MP-2 TV MODULATOR £15. If you have a green monitor this will let you link your Amstrad 664, 6128 to any television. Tel **Wigan 218191** after 7pm.

PACIFIST (strategy game). A world at war, with armies homing in on each other. Block their paths, capture and rehabilitate them. Homebrew £2 + tape/disk. **A Swinbourne, 11 Vicarage View, Redditch, Worcs B97 4RF.**

Amscene

Gossip, chat, and CPC-type news aplenty



Aloha!

This is my third issue and I think I'm beginning to get the hang of it. We're gradually changing the look of AA (we think it's for the better, how about you?) and we're beginning to incorporate some of your constructive suggestions for what you want to see in the mag. Thanks for that - it just goes to show that

it's well worth telling us what you want.

In line with some of your suggestions, we've got four pages of Techie Forum this month and next month we'll start putting the size of the covertape files on the tape pages so you know how much space they'll take up when you transfer them to disc. (Thanks to Geoff Palier for the idea)

Ah well, enough of my prattle, on with the motley...

SD Microsystems

Are we stupid, or what? Last month, we printed a little story about how SD Microsystems had mysteriously disappeared. The only problem is, they hadn't - we just got monstrously confused. SD are still about, supplying their business software and other useful stuff like *Page Publisher* (DTP) *Picasso* (art) and loads more, they can be contacted at:

PO Box 24, Holbeach, Lincs.
☎ **0760 720381.**

Our most sincere apologies to SD, and we can assure the rest of the world that Simon is being beaten with knotted rope as you read this.

File Conversion

Not only are SD Microsystems still alive and kicking, they're offering a conversion service from CPC to PC for just £5 per disc. So if you've got some CPC word processor files that you want to share with your PC-owning friends, just save them as ASCII files and sent the disc to SD with yer fiver.

Just The Ticket!

Fancy a free ticket to the All Formats Fair? Dartsma have got a hundred to give away, to the first 100 people to place an order from the time you're reading this. They've

also got thousands of £1 vouchers to get you in a little bit cheaper if you don't get the ticket.

Keep Safe

There's a brand new software company, dedicated to the CPC. Watch out for a review of their first product next month (a disc archiver), and maybe some more stuff in the future. In the meantime, we wish them the best of luck.

What?!!

Bull Electrical are now selling GX4000 consoles for the absolutely ludicrous price of nine pounds. You can reach Bull on (0273) 203500. This means, though, that the cartridges now cost over two and a half times as much as the console they work with!

Universal Surplus are also selling gear at a knocked down price, with the NC-100 notepad going for a song at £99. They can be reached on (0630) 655801, or (0630) 655797.

They seek it here...

Siren Software, saviours of the planet and providers of the 3.5" DD1-1 drive, have now announced that they've got some 3" DD1-1s complete with interface (so they

work as a first drive) and Master Disc for only £160. The down side, however, is that you won't get your free multiface as you would have with the 3.5" version. It's still a worthwhile buy though, so give Siren a ring on 061 724 7572.

They Seek It There...

Rickitt Educational Media has a big selection of educational software AND, if you nominate a school when you buy from them, they'll send a software voucher to the school for 10% of your order value. We'll tell you more next month but in the meantime contact Tsui (pronounced Choi) Miller on **0460 57152**

Seeking Software Everywhere!

Jonathan Smith, and anyone else who wants to find disk software for

their CPC, why not write to Software On Demand for a full catalogue of a huge range of disc-based software? They're at Software On Demand Ltd, Customer Service, Unit One, Rosevale Business Park, Newcastle-under-Lyme, Staffs, ST5 7QT. Not only can they sell you software by mail order, but they can point you to your nearest computer stockist supporting the EDOS system.

I'm A Fishmonger!

Or a computer programmer, of course. We've had a whole wodge of entries for last month's compo, and there're some pretty good ideas flowing. But this isn't enough! We want more! Don't be afraid to send yours in - the strangest ideas always work the best as a computer game. Just because it hasn't been done before doesn't mean we can't do it in AA first!

No AA? No problem.

Wherever you live, you needn't be without the world's most lovely CPC magazine. Just fill in the coupon below...

MAG*SAVE

Dear Newsagent, could you please order me a copy of *Amstrad Action*, starting with the June issue, out on May 27th. *Amstrad Action* is published by Future Publishing, and you can order it from your wholesaler. Thanks.

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* Together with the 3.5" drive, this is the lowest costing 1st drive by a very wide margin.

Please write or phone for details
before sending your computer.

Creative
Counting

There's no need to shy away from spreadsheets and databases - they're a lot more useful than you think.

So AA start giving away some excellent serious software on the front of the magazine and plan to put some business software on in the future to help out if you're planning to get started in business. But what if you don't happen to be running a business? What use is all this stuff to you? Even if you are starting a venture, can you really be bothered to use a spreadsheet? Will a database have any advantage over a pile of paper?

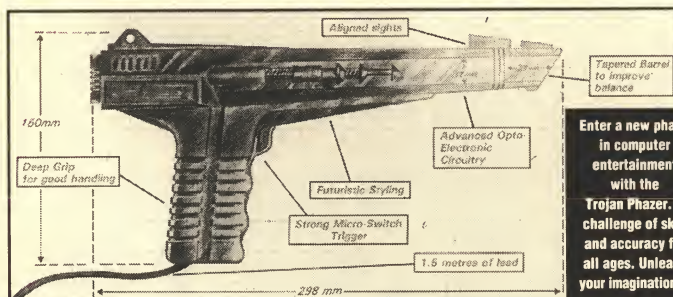
Take a look through the ad pages of AA. Every time you come across a small, up-and-coming software house, think about what machine is keeping their affairs organized. The odds are it's a CPC. Now, we're not saying a CPC can replace a PC, but if you happen to be running a business on your humble old 8-bit, you'll have found it wasn't as difficult as you at first thought.

We're not asking you to run out and buy yourself a complete accounting package -

we're not asking you to put your entire life onto a floppy disk. We're just asking you to take a look at the next four pages, and consider just what uses an organizational package could have in your life.

You see - serious software doesn't have to be stuffy. We gave you Tasword, the word processor, and though a word processor is traditionally a serious package (who just wants to type on their CPC? Why not just play games?), you took to it like a fish to water (after we ironed out the bug).

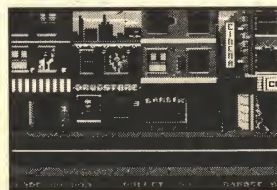
When you read the word processor run-down a few issues back, you hadn't heard the last of serious software. Over the next few pages, we'll be taking you through some of the main applications of your computer in business, and some of the uses you probably never considered putting your CPC to. So get yourselves comfortable for a fun round-up of serious software...

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Phazer Gun plugs straight into analogue port (next to joystick port). Comes complete with SKEET SHOOT CARTRIDGE.



SKEET SHOOT consists of 6 levels, each broken up into two normal rounds and one bonus round. See games review in Amstrad Action - Feb '93



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Spreadsheets

Spreadsheets, eh? Aren't they those terribly complicated number things that accountants use? What do I want one of them for?

Ho hum – how to explain a spreadsheet. We can visualize a spreadsheet as just a piece of grid paper, with rows and columns. In each of those cells you can put a number or a word or, more usefully, a few mathematical instructions. So if you've got a whole load of calculations to make, a spreadsheet might be just the thing you need.

For instance, take a look at figure one. The blue boxes here just contain values (called, for arguments sake, x), and the red boxes contain results of the equation x^2 (the value times itself). Take a good look, and you can see the basics of how a spreadsheet works. But what are the green boxes? Well, they're the totals of each column. Simple, huh? We could even add a purple box that calculates the totals of the totals (if you see what I mean).

But why not just do all this with a bit of paper and a calculator? Well, let's say for instance we want to change one of the values in the blue column. With a bit of paper, you'd then have to redraw the entire sheet. With a computerized spreadsheet, the changes are instantaneous (or as near as damn it). So, with figure two, you can see the change.

Now... The use we've made of a spreadsheet here isn't exactly all that riveting, but so long as

you get the idea of the way the things work, then that's okay. You see, you could do just about anything with a spreadsheet – here are a few ideas to get you started:

Doing your homework

A-Level statistics, eh? What fun. So why not do all those irritating quadratic, simultaneous linear, curve, and T-test equations on a spreadsheet? You could use the package to create whole look-up tables of various values and results at the touch of a few buttons. These are not the only uses – you could test correlation, conformity, degrees of freedom, margins of error, you name it, a spreadsheet can do it.

Home accounts

Everyone who's ever had to run a home will know just how easy it is to lose track of things. Incomings, outgoings, and not-quite-sure-ings running up the walls. All that can easily be stored on a spreadsheet, making things so much easier. If your pay increases, or your mortgage goes up, you can enter the new figure and have the sheet adjust itself accordingly.

Making a decision

Just think. After months of painful deliberation, you finally, much to the dismay of your wallet, decide to buy a car. But which car? There is a much simpler way to decide than walking round kicking tyres. Why not set up a table of various cars, calculating their fuel consumption over distance, etc? It would make life much easier, and allow you to make a more informed decision.

Making lists

It might also be wise to remember that a spreadsheet, at the end of the day, is just a grid of boxes – a souped-up table-maker. This issue's Balrog, for instance, has a list of every adventure to appear in AA since the dawn of civilization. This list was produced on a spreadsheet, which automatically laid all the figures out neatly, instead of messing around with a word processor and a few hundred tab spaces.

Share prices

You don't need to be a high powered millionaire to tinker with the stock market, just as you don't need to be a professor of mathematics to operate a spreadsheet package. Norman Lamont actually uses a CPC464 to keep track of this country – this entire recession can be blamed on a slightly grubby pinch roller, you know.

Sports tables

To play baseball in this day and age, you good hand to eye co-ordination, a fast sprint, and strong forearms. To follow baseball nowadays, you need a degree. The statistics don't just state who's where though. They also display individual player performance, games behind, toenail length, etc. So why not keep track of the league on a spreadsheet? (I do. – Ed)

Ventures

For a small business, accounting can be a hassle, and an expensive hassle at that. So why hire an accountant to do the job that a spreadsheet can do for less money, and in a fraction of the time? Just think how much easier running a business would be if you brought a spreadsheet into the equation.

Did you say bed sheets?

This column is set up so you can type numbers into it. They can be any numbers you choose...

This column is programmed to work out the value of your number times itself (x^2).

Because this column contains an instruction, when you change a number in the left-hand column it changes automatically.

1	1
2	4
3	9
4	16
5	25
15	55

These two boxes here have been programmed to work out the sum of all the numbers in the columns above.

And this box adds them together. Obviously you can get the boxes to provide you with any information you need about the other boxes.

1	1
2	4
3	9
4	16
6	36
16	66
82	

When you change this number here, everything else that has anything to do with it changes too.

All the totals changed and you didn't have to do anything except change the 5 to a 6. This is very useful.

What do you want? We want information.

AUTOMATIC FOR THE PEOPLE

Artist:	REM
Title:	Automatic For The People
Producer:	Scott Litt & REM
Label:	Warner Bros
Published:	1992
Format:	CD
Catalogue Number:	9362-45055-2

Singles released	Tracks:
Drive	Try Not To Breathe
Man On The Moon	The Sidewinder Sleeps Tonite
The Sidewinder Sleeps Tonite	Everybody Hurts
Everybody Hurts	New Orleans Instrumental No
	Sweetness Follows
	Monty Got A Raw Deal
	Ignoreland
	Star Me Kitten
	Man On The Moon
	Nightswimming
	Find The River

...and sure enough it is. The field names are taken straight from the original card index. If you want to find a particular song, simply ask the database to search the Tracks field for the title.

On the left is the sort of thing you might produce if you keep a card index of your record collection. The black type is the stuff that's unique to this particular record. The red describes the information. It should be easy to computerize...

Record No 1
Artist :REM
Title :Automatic For The People
Label :Warner Bros
Producer:Scott Litt & REM
Published :1992
Format :CD
Cat No :9362-45055-2
Singles :Drive, Man On The Moon, The Sidewinder Sleeps Tonite.

Databases

All right, then, but aren't databases huge complex stores of information used by police forces and mail order companies? What do I want one of them for?

So a spreadsheet on computer has serious advantages over a paper version. But what about names and addresses? What about that information that can't be neatly arranged into tables? What about text? Well simple really – use a database.

A database is exactly what it says it is – a data storage base. You can store information. So what makes them so powerful?

When we write down an address on a scrap of paper, we classify it mentally into three forms of information, because an address is really just three points of reference. Let's call these points, for arguments sake, fields (that's what databases call them). First off then, we have the name field, for example, Arthur Mo. Secondly, we have an address fields, like 30 Monmouth Street, Bath, BA1 2BW. Finally then, we have a telephone number, like (0225) 442244.

Okay, so you've written all that down, and your friend Arthur goes and moves house, to 17 Wibble Street, Bath. So you have to scrub out the old entry in your little address book, and enter the new one in a convenient space. Even if you've got a loose leaf system like a Filofax® you'll still have some amount of fiddling about to do. If only

you had a storage system that allowed you to enter information, view it, and above all, edit it. What you need is a database.

Get it sorted

So here we have, in it's simplest form, a type of word processor. But this word processor has a feature for only editing certain pieces of information, labelling what is stored, and processing it. You see, whereas a normal WP package would just allow you to type in information and print it, a DB package would sort the information (alphabetically, numerically, etc), print only certain parts (or fields) of data on request (like just names and phone numbers for a phone list, just names and addresses for a mailing list, etc), and search for information in specific fields (just names, etc). Wow, or what?

But you don't just have to use a database for storing names and addresses – Oh no. There are many other types of information you can store with this kind of device. Here we go:

AA information

First and foremost, of course, there's the obvious and probably most important use of a database – storing issue details of the worlds most excellent, informative (*And only.* – Ed) CPC mag. You could reference cheats, reviews, adventures, changes of editor (do we have a database powerful enough, though?).

Books and Records

Don't you just hate sorting through 300 albums just to find the one you want? It could be on vinyl, tape, or CD, and you've got no idea which, even if you do manage to keep them in some sort of order. So why not keep a record of all your collections on computer? It's also nice to be able

to print out a list of seven or eight hundred albums and impress people with.

Music

Do you play guitar? Or how about piano? So you're sitting around, fiddling with about a bit, and you come up with a whole new exciting little riff. If you can get your database to display five lines of information (or six if you work in tablature) and allow you to edit it at will, shouldn't you store all your little odds and ends of music on a database? This way, you can retrieve any reference at a moments notice, and even persuade it to print them out for you.

Software

If you follow the reader action guides that seem to be liberally scattered around the hallowed pages of AA, you'll probably be fairly interested in just how to set up a working PD library. So you've got 200 little programs in your collection, stored on who knows how many discs, and you need to keep track of them all. So why not store the name of each program, along with the disc number it's stored on (you do number your discs, don't you?), so that you can find them instantly, and fill the orders of all those darling users in no time at all.

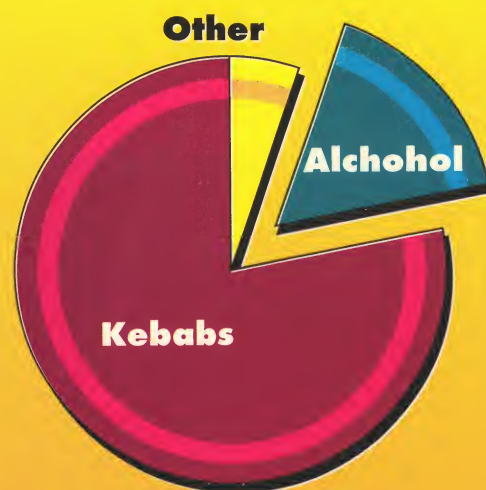
Student notes

Go and visit a friend at college sometime. Check out the book shelves full of various healthily massive tomes. And as they search desperately through 23 of them looking for a one line quote that, if they remember correctly, might be relevant to a particular essay, laugh at them and think just how easy their life would be if they stored details about each book, along with important quotes and ideas, on a CPC.

If you've got it, display it.

It's all very well having a disc full of data, but a grid full of numbers doesn't exactly provide you with a clear view of

what the figures actually mean. This is where a graphical representation of your figures may come in handy.

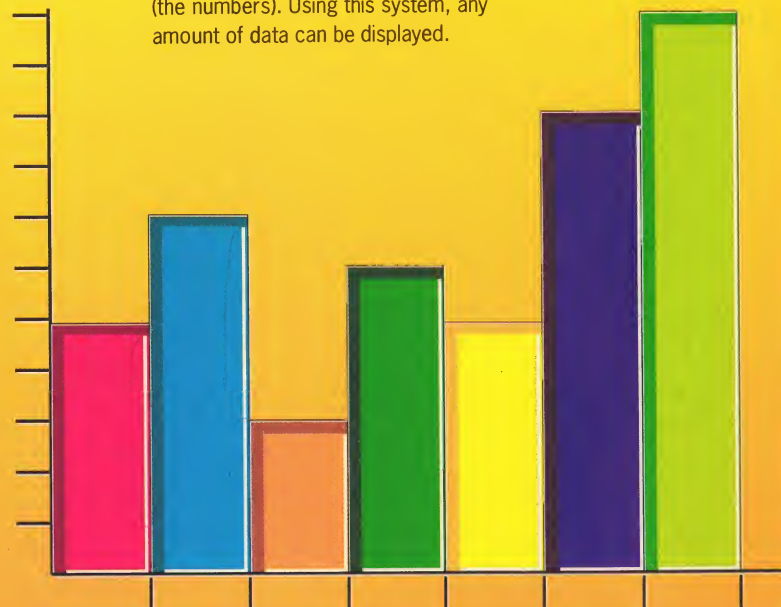


Pie Charts

Pie charts have one major advantage over bar charts – as well as displaying values in relation to each other, they also display values as a proportion of a whole. They work quite simply, by showing each value of a slice of an overall pie.

Bar Charts

A bar chart is a form of data display that probably everybody is familiar with. ('With which everyone is familiar', surely. – Ed) One axis contains the descriptors (names, groups, etc), and the other contains a scale (the numbers). Using this system, any amount of data can be displayed.



Just The Business

Of course, you'll need a few more packages to run a business, or you may just want a more specialized package for home use. Well, there's a company that concentrates on the more serious side of the CPC – SD Microsystems.

SD have one main philosophy in life, and that's that a CPC can do anything a PC can. And although this isn't strictly true if you want to get all pedantic about it, they have proved that for most practical serious needs, a CPC can certainly do the job quite adequately. So what have they got on offer?

General Ledger 6128

Probably the most prominent thing in the range is *General Ledger 6128*, which is a standard book-keeping package, aimed at small businesses and the self employed. This, then, is probably the first package you should buy if you don't already have a computerized accounting system.

But Can It?

Reading the last part, there's probably one huge question hanging on the lips of several thousand readers (makes you feel kinda small, doesn't it?). Can a CPC beat a PC? Well, no. A PC is a large and powerful machine with a fast processor, and powerful mathematics capabilities, whereas a CPC is an 8-bit home computer. So I think we've quite nicely

Graph-Master

From a slightly different angle, that of presentation, there's *Graph-Master*, which produces a variety of graphics displaying any set of figures you care to give it. It displays pie charts, histograms, line charts, etc (see above for an idea of what that's all about).

Home Accounts

As mentioned earlier, business packages could be used to run a home on. But why use a full business package, when you could get hold of a tailor made home accounts package?

Kwikfile

Remember the stuff about databases? Well *Kwikfile* is, quite simply a database! It's set out in a sort of file-card way, and allows sub-files, fast searches, etc. It should be suitable for most of your data processing needs.

established the fact that a CPC can not perform to the standard of a PC.

However, it can achieve the same results with mathematics. Sure, it takes about ten times as long, but you can achieve the same effects. When it comes down to it, the CPC does have a comprehensive set of maths functions, and should be quite capable of serving the kind of purpose you would buy a PC for, but please remember that a CPC is nowhere near as powerful as the PC range.

Mailing List

If, on the other hand, you would be using a database to store mailing lists, SD come up with the goods in a more direct way. This is a package specially designed for printing mailing lists and address labels, which should be a bit simpler than fiddling with a full database.

Payroll Program

We're really getting into the realms of business here! This is a payroll package that works out all that tax, holiday pay and NIC stiff. I'm not going to go into the complexities of calculating payrolls here because I don't understand it. If you want further details, you'd best contact SD.

Small Traders Pack

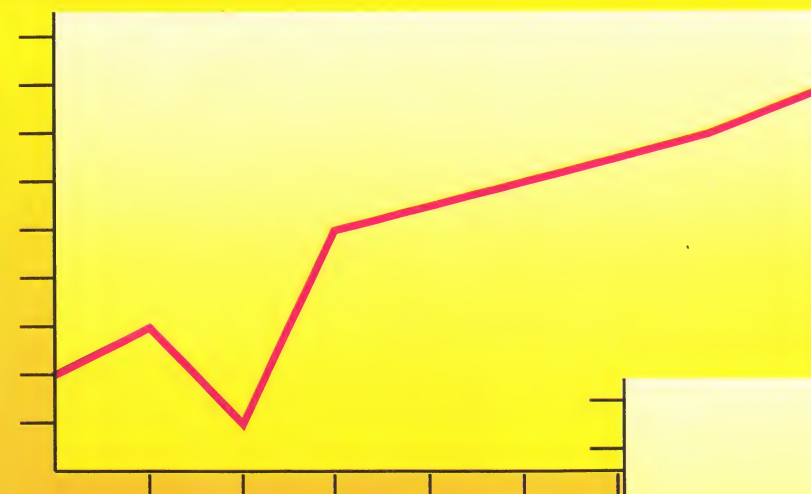
If you're just starting on a small scale, this is the bit for you. The *Small Traders Pack* contains sales and purchase ledgers, a stock database, a mailing list address labeller, and an invoicer and statement printer!

Stock Accounting 6128

Another meaty program from SD, this. It contains stock control, invoicing and sales ledger, and is all very complex. Suffice to say that it pretty much covers everything you'll ever need as far as accounting for your stock is concerned, but you'll have to get back to SD for the finer details.

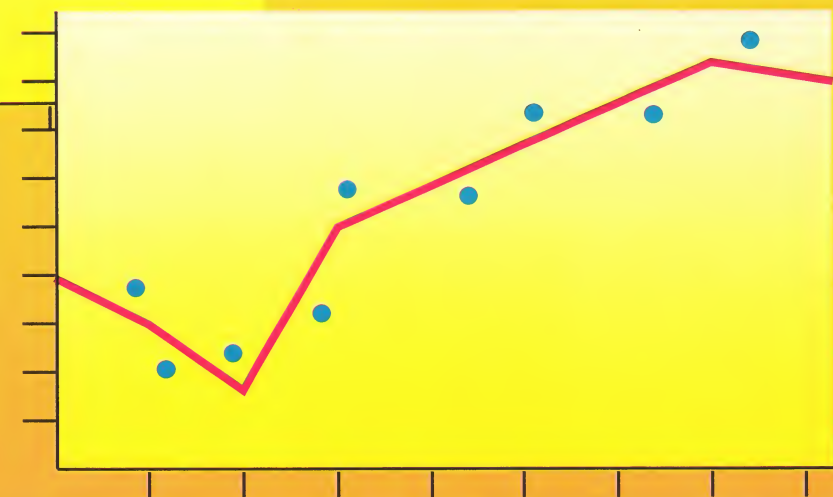
Contact

SD Microsystems
PO Box 24, Holbeach, Lincs.
Tel and fax: 0760 720381



Line Graphs

Line graphs come into common use as a replacement for the bar chart when both axes are to show scales, instead of one containing something else. Look – it's really simple, honest! Take a swizz at the diagram. Using this, you can see correlations, changes over time, and just about anything.



Scatter Chart

When you're in a physics lab (And when were you last in a physics lab? – Ed), and you're conducting a little experiment, you may notice that your results will never, repeat, never fall onto your graph in a perfectly straight line. If they do, you're doing something wrong. So instead of having a line graph that bends so much it's unplotable, we use a scatter graph. As you can see, instead of a single line we have a mess of dots that, if we want, we can draw a line through.

An Example...

Campursoft

Campursoft, a company who specialize in CPC hardware and software, run their affairs totally on a CPC. We thought we'd find out just what their machine gets up to in the average day. So what software do they use?

ROMs

Software on ROM has several serious advantages over disc based packages. First, it is very rare that a ROM will ever get corrupted. Secondly, ROMs load in a matter of seconds without having to swap discs, run files, etc. So what ROMs do Campursoft use?

Masterfile 3

This database is certainly advanced enough to deal with any job it could come up against in everyday office use.

Protext

Arnor's word processor comes on tape, disc, or ROM. The ROM version does have an advantage over the other formats though, allowing higher file sizes (no foreground memory is taken up by the software itself), and can therefore handle more text at one time.

Prospell

An addition to *Protext*, giving it a full spelling checker. If you have *Protext* on ROM, it only

makes sense to have any accompanying software on ROM as well.

Promerge

Well, what did you expect a mail merging package accompanying the increasingly powerful *Protext* to be called?

Other

As well as the straightforward packages, Campursoft do use a lot of other CPC software to keep things rolling. Amongst these are *Nirvana* (a disc management suite, that saves their lives regularly), *Maxidos* and *Utopia* (for other computing problems), and finally, *Maxam* (an assembler), for writing software.

Storage

Just as this feature was being finished off, Campursoft contacted us with the other very

Come On...

It's all very well, sitting in your armchair, or lying on your bed, but when are you going to get involved? Now that you've had a slight insight into serious software, why not put some of it to good use! Here we go then...

If you've started using a serious package for an original or blatantly strange purpose, write in and let us know. If we get enough response, we'll consider running a follow up in a few months. If we get any really interesting replies, we might consider bunging a small cash prize in the direction of the sender of the most original use for business software.

important piece of equipment they use regularly – a high density drive. Of course, when they start mass production of their hard drives, they'll be even more use aiding businesses, but for now, it's the 3.5" drive that's providing a storage system for Peter Campbell and Jess Harpur. ●

Availability

We could use this last part to give you a list of the various packages, and where to get them but unfortunately, tracking down who sells what nowadays would be impossible. Most of the original software companies have either dropped the products, sold the licences, or changed names. So unless you manage to find packages hovering amongst the adverts here in

AA, you'll just have to keep scouting. There are still a few places to look though – try The User Group, MJC Supplies, SD Microsystems, etc.

Next month, with a little luck (these things can change at any time), we should have a database on the covertape for you, and we're currently undergoing negotiations for a top spreadsheet system for the month after. All that and your regular games, etc. What would you do without us?

The keyboard is dead Pen Pad PDA600

Amstrad ■ 0277 228888 ■ £299 (inc VAT)

and buy a diary every year. Slightly more go for the Filofax-type approach (we're dealing with journo's here, so it was bound to happen) and say they like having a big diary/address book and appreciate the facility to add pages when they need them. There were also a few who use an electronic organiser. (Oh, by the way, in case you're interested, Simon keeps his addresses on his computer and neither knows nor cares what day of the week it is.)

I used to be a Filofax sort of a person, but a couple of years ago I bought myself a small electronic diary/address book thing. It fits neatly into the pocket of an ordinary jacket and stores all the information I want it to. It is, however, a complete pig to use. I haven't got the world's fattest fingers but I do find poking away at the tiny keys a bit of a chore. This is where the Pen Pad could come to my rescue.

Stylus counsel

The Pen Pad has dispensed with the need for a keypad altogether – all you need is a plastic stylus (they kindly supply two, but anything that won't scratch the machine will do). That's all very well, but devices that sense the movement of a stylus on a screen have been around for years – what's so special about this one?

It recognizes your handwriting. When you switch it on for the first time it takes you through a sort of tutorial where it gets you to teach it your handwriting. From then on, whenever you want to store information in it, it gives you little boxes to write in and then interprets your scrawl as typed characters. Obviously it's going to have a little trouble from time to time so it also allows you to re-teach it any letters it can't recognize.

But does it work?

It does, indeed... mostly. It took me about half an hour's use to get it to learn my writing and after that there was no stopping us. Names, addresses, phone numbers, 'to do' lists, appointments – I just scrawled them in and the Pen Pad sorted it out.

I tried it out on a few others, though, and it can have trouble with some people. It seems that if your writing isn't very consistent you're going to have problems. Even with four versions of each letter, one person had trouble getting the machine to tell the difference between an 'm' and an 'n'. Overall, though, it was very impressive and much easier to use than a normal electronic organiser.



That's almost how easy it is – the machine would have interpreted all those letters.

It has a Notes facility, too, which just gives you a blank page (or part of a page in the Diary section) where you can just scribble things and the machine makes no attempt to interpret them – it just remembers them. You can draw maps and diagrams and you need never use a piece of paper again.

And, of course, it can communicate with the outside world. Link it up to an RS232 interface and you can transfer your names and addresses onto your CPC. These being the '90s, the flashy software will all be for the PC, but there's no reason why you can't dump simple information (not your pretty diagrams) onto a CPC.

To sum up

It's an extremely clever little device. It's easy to use and managed to recognize most people's handwriting after a bit of coaxing. It's quite heavy and bulky, though and won't fit in the pocket of an ordinary jacket – but then neither will the Psion Series 3 – you'll either have to have a word with your tailor or shove it in your case/handbag. It doesn't have the word processor-type facilities of the Psion but neither does your Filofax.

I love gadgets so I'd buy one tomorrow – although at £299 (inc VAT) I think I'll probably still be saying that in three year's time.

92%

Tim Norris took a little break from serious computery things and had a look at the future of personal organisers.

You may remember reading in AA92 about a nifty new gadget from Amstrad called the Pen Pad. Since then you may also have seen it on Tomorrow's World. It's also known, for reasons that are never adequately explored, as the PDA600. PDA stands for Personal Digital Assistant but the '600' bit is a mystery. Still, I managed to get hold of one for a few days to have a bit of a play.

A quick survey of people whose phone numbers I could remember revealed that almost everyone uses some sort of portable means of recording addresses, telephone numbers and things to do. A few use traditional address books



There's handy conversion table. And we're so cheap we've used pics from the brochure.

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Side Select Switch £3.00

The side select switch allows the use of side A and side B on your 3.5" discs. The kit comes complete with full fitting instructions and is suitable for any make of disc drive.

6128 ROM £24.95

The 6128 ROM upgrade allows the use of CP/M Plus operating system and features some extra BASIC commands. It will also allow the use of 6128 only software. It comes with full fitting instructions. Some delicate soldering may be required.

Dk Tronics RAM Pack £39.95

The single plug in memory expansion pack features some extra BASIC commands, and bank switching software for use as a data bank. The bank switching is done automatically and is ideal for use with CP/M 2.2 and CP/M Plus with the 6128 ROM fitted. Expands your 64K RAM to 128K RAM, and brings your 464 up to 6128 capacity. Will work straight off. Plus machines require a Plus to Edge (Widget) connector.

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Technical Forum

The curious and bewildered gathered round, and they said, 'Help us, we need technical advice, where can we turn?' And Richard Fairhurst smiled benevolently on them and said, 'Don't worry, I shall help you.'

Let's not mess about here, let's get straight into the letters.

Second place

I have two CPCs, a 664 and a 464. (Same here. - Richard) For the 464 I have a DDI-1 disk drive. Can I use this as a second drive for the 664? Is there any difference between a first drive and a second other than the interface provided with the 464?

Also, I have a Voyager 7 modem, from Modern House, which doesn't seem to be working - after autodialling I only get a long stream of gibberish. I think it is the modem, because I can echo text through it when it is on 'Test'. Could you please tell me where I can get it repaired and approximately how much it would cost?

**Mark Stewart
Belper**

The drives, you'll be pleased to know, are absolutely identical save for the interface with the first drive. You should be able to obtain a cable

from most CPC mail order suppliers, especially those who specialise in disk drives.

It's unlikely that your modem is broken. More probably, you haven't got it set up correctly. You will need to set your terminal program to the highest baud rate (speed, e.g. 1200 baud) that the modem and bulletin board you're calling have in common. You also need to set it to 8 bits, no parity, one stop bit (8N1) for most bulletin boards. Consult the Voyager's manual to find out the highest speed it can run at.

Very dead editor

I own a 6128, and recently purchased a word processing program, entitled VDE.COM, from a PD library in Cumbria. Unfortunately, the program arrived with no instructions, nor did the PD library have any available when I contacted them, and the program does not work.

This set me back £3.75 and unless I can get it working, that's £3.75 wasted, which I cannot afford to do. Certain files located on the disk seem to be either instructions, installation or documentation, and it is my belief that some setting up is required. I have attempted to print the files, but I must admit I do not know how, having not spent much time with my Amstrad. Can you help please? I am led to believe that this program is popular amongst Amstrad owners, and hopefully it will be just the job for the novel I am attempting to write.

**Andrew Hall
Isle of Wight**

Don't forget that Tasword was given away on our

covertape, and although it's not the ultimate word-processing system, it's not bad either - VDE is faster but much less user-friendly.

VDE is a CP/M program, and so you need to run it from your CP/M boot disk (if you don't have one, read your 6128 manual for instructions on how to create it) by typing ICPM and, at the A> prompt, VDE. To read the instructions, enter TYPE VDE.DOC (from CP/M).

As you seem a bit unsure as to what to do, the best bet is to send off for a free copy of VDE from PD library Sheepsoft. Their disc comes with very helpful and easy-to-follow instructions on how to get the program running. Write to Paul Fairman (World's Greatest VDE Fan) at 39 Woodlands Road, Barry, South Wales CF6 6EF - with the disc and an SAE.

A note to PD libraries everywhere: distributing software without being able to offer help to its operation is a bit off. Andrew wasted £3.75 on something that was no use to him. Here's hoping it never happens again!

Think of a number

1. I have a 64k upgrade which I bought second-hand, so I didn't get any manuals or tapes, and I wondered: what does the tape do, and what are the extra commands?
2. The DDI-1 disk drive manual says it also comes with assembler and batch utilities. What do they do, and how do I use them?
3. The 40025 ROM that I bought from WAVE came with an installing sheet, but not a list of 6128 commands or how to use them. Could you tell me what the commands are?

the MS800 copier isn't up to copying text files, and it seems to have trashed yours.

Solutions? Well, this listing will copy text files from drive A to B properly (for different drives, alter line 20 accordingly):
10 LINE INPUT "Filename: ",ff
20 OPENIN "A:";ff\$: OPENOUT "B:";ff\$
30 WHILE NOT EOF: LINE INPUT #9,a\$
40 PRINT #9,a\$: WEND
50 CLOSEOUT: CLOSEIN

Alternatively, you may want to look around for a better operating system. As you said, ROMDOS XL is more capable, and especially so when coupled with the excellent copier Maxidos (see the Avatar ad). Alternatively, S-DOS's built-in copier will cope with any file you care to throw at it (STS Software, 58 Graiglywd Road, Cockett, Swansea SA2 0XA).

Corruption scandal

Something odd is happening. I have a 6128 and have been reformatting my 3.5" disks with MS800, format 4. Two text files are misbehaving: BRIDPROB.TXT now loads another file, STDCODES.BIN. The original content seems to have vanished.

The size of STDCODES, after transferring it from another disc, was shown by CAT as 65k. When I loaded it into Masterfile, it appeared as 20k - much nearer the true figure, I'd say, and I've no idea what accounted for the extra 45k. Another text file, MAGREFS.BIN, was shown to be 66k in size but here again Masterfile indicated only 6k!

MS800's copier seems to resent certain

types of file and stops almost before it starts. ROMDOS XL will do some, and CP/M Newsweep and PIP are often okay.

**John Hawkins
Stevenage**

Hmmm. When you load a text file in machine code, there is no way to tell how long it is, and so the value returned for its length is zero. If a copier blindly saves it out again with this length, then it will be taken to be 64k long (because 64k goes 'round the clock', like a car speedo, back to zero). Add a few bytes for the file header, and you have 65k (or 66k on a large format disc) - hence your problem. Basically,

Angry of Gwent

I have a complaint to make. I had trouble with your covertape from AA 90. I sent it back to Ablex Audio Video, and when they sent another one back to me it was the same as the one I had returned. The trouble with mine was in the Type-Ins. In *Flags*, by Ross Riley, it loaded all right but when I try to run it, I get an error in line 150. So I listed it, and it only ran to line 140... another thing that was wrong is in *Number Scoffer* by Dean Jackson... I am very disappointed with the outcome of this service...

**H R Meredith
Gwent**

If there is a fault with the covertape itself, then

4. I've also got a joystick splitter but when I play the games, the two characters copy each other's movements. Is this a fault, or does this always happen?

**C Unreadable Surname
Somewhere**

Ah, Technical Forum wouldn't be complete without a letter of numbered questions and someone who's forgotten their address. Anyway...

1. The tape gives you some extra commands (they're not built into the expansion) that let you use the extra memory in your own programs.
2. True, the CP/M disks do include an assembler. Unfortunately, it's for the predecessor of the Z80 processor used in the CPC (the 8080), and isn't much use at all. The batch utility SUBMIT.COM is rather nice, though.

Simply create a text file of CP/M commands you want executed, and call it (for example) COMMANDS.SUB. This is known as a batch file. Now, from CP/M, type SUBMIT COMMANDS (making sure that both SUBMIT.COM and COMMANDS.SUB are on the disk), and it will do them all for you. Handy hint: any batch file called PROFILE.SUB will be executed when you boot CP/M (so long as SUBMIT.COM is on the disk too).

3. The new functions are COPYCHR\$(#stream), which copies a character from the current cursor position in that stream, DEC\$(number,format), which formats a number in the same way as PRINT USING, and DERR, which returns the number of the most recent disk error.

New commands:

CLEAR INPUT clears the keyboard buffer (i.e. forgets about any keys pressed recently),

CURSOR a,b enables or disables the cursor (a is the operating system control, and b the user control: 0 for off, 1 for on),

FILL ink fills a shape in that colour,

GRAPHICS PEN ink and **GRAPHICS PAPER ink** are fairly obvious,

MASK pattern, starting point defines a binary pattern for drawing lines (so MASK &X11110000,4 makes all lines from now on dashed lines, starting in the middle of the

the CPC will pick this up and give you a 'Read error'. Otherwise, it's the programs themselves which are at fault, so please don't send the tape back to Ablex. They can't help with the actual programs, but only with tapes duplicated badly.

Instead, write to us, but don't bite our heads off...! The reason that the programs did not work is because their authors used commands that the CPC 464 does not possess.

To test every Type-In we receive on a 464 would take up huge amounts of time, so all we can do is humbly ask would-be Type-In authors not to use these commands (see Mr Unreadable Surname's letter below).

pattern), and

ON BREAK CONT disables the ESCape key completely.

In addition, the MOVE command can take an extra pen ink parameter (in the same way as PLOT and DRAW), and MOVE, PLOT and DRAW (plus their relative equivalents) can take a fourth parameter indicating the plotting mode to be used (0 for normal, 1 for XOR etc.). Whew!

4. Since not many people have joystick splitters, games aren't generally written for them. However, if you select the 'Redefine Keys' option and set up the second player's controls by moving the second joystick appropriately, you should have more luck.

Insider

Concerning the article in AA90 on upgrading from 64k to 128k. Does this article only apply to 464 Plus models, or does it also apply to the earlier 464? The idea of the extra capacity being inside the machine instead of being plugged in at the back, seems to me to be a far better (and cheaper) idea.

**Brian MacDonald
Grimsby**

If only... Unfortunately, given the high price of 464 memory expansions, this isn't possible. The 464 Plus has basically the same circuitry as the 6128 Plus (which makes sense, really, it saves an awful lot on manufacturing costs for Amstrad), including sockets for an extra 64k.

But wouldn't you just know it – the 464, is a completely different design to the 6128.

Sorry.

In-depth delve

1. Do you know of a company that supplies a C compiler/language? (Hi-Soft used to!)
2. Is there an easy way to determine what is data and what is code in a hex dump, or is there a package that helps?
3. Is the Firmware Manual still available?
4. Is there an 'in-depth delve into the CPCs' book? I have the Advanced User's Guide Book 1.
5. To save disc space, I hope to convert some of my old BASIC type-ins to machine code. Any

suggestions? Sorting through the BASIC interpreter disassembly is a nightmare.

**Paul Collins
Poole**

1. You could 'phone the various mail order suppliers and ask if they have any copies of Hi-Soft's version floating around. Alternatively, have a flick through some PD libraries' catalogues – a Small C interpreter (SCI) and compiler exist.
2. Well, if you use a disassembler, the bits that look like gibberish, or are full of zeros, are probably data. Look for familiar bytes in a hex dump. If a section has loads of common Z80 bytes like CD (CALL), C3 (JP), 21 (LD HL,...) and 3E (LD A,...), then it's almost certainly code.
3. No.
4. The Print-Out alternative version, although nowhere near as complete, is a possible alternative to SOFT 968. If the book you have is Daniel Martin's one, then it's one of the best there is. Apart from that, you'll need to search through the classifieds to see if anyone is selling their SOFT 968 Firmware Guide, 'Ins and Outs of the Amstrad', 'Anatomy of the CPCs', or other such book. (Remember that we're here to help, too. Techie Forum is equally at home with complicated operating system stuff as beginners' questions about disk drives!)
4. Don't simply convert instruction for instruction. Instead, build up a library of useful subroutines (such as number printing, etc.), and use these as replacements for the BASIC commands. Is it really worth it just to save disk space, anyway...? If you don't have a 3.5" drive, buy one now. This will save you more on disks than you'd think!

Multiface mix-up

I know you have answered some Multiface 2 questions in the March issue, but I have another I hope you can help me with. My son has a CPC 464 and my older son has a 6128 Plus. I would like to get them a Multiface 2, but wonder if it would be any good to them. Could one copy a tape on the 464, put the box on the 6128 Plus and transfer it to disc? Would it be any great advantage to either of them? AA is brilliant, a life-saver to us all.

**Ms R Farrelly
Dublin**

AA saving lives? Blimey, we'll be putting out fires and rescuing maidens in distress next. All the Multiface does is immediately copy what's in memory to disk. This means that, to transfer a game from tape to disk, you need both a tape recorder and a disk drive connected to the machine in question. You can buy a 3.5" disk drive for the 464 from Siren Software (3" ones aren't available any more), or for a cheaper alternative, 6128 Pluses can be modified to load from cassette, by Wave, STS Software, or Avatar.

Even then, there is a problem in that games transferred on one type of CPC won't run on another type (although a PD program called Anti-Multiface will remove this problem). Remember, too, that the Multiface for the Plus is different to

that for the CPC, and that copyright laws forbid you from playing the same game on two computers at once unless you buy two copies...!

If you still want to go ahead, then the main advantage is that your 6128-owning son will be able to play tape games without having to wait ages for them to load. Whether it's worth the expense of a Multiface and a tape conversion is debatable.

From CPC to Plus

1. How can I save and load the values of variables in BASIC programs on a CPC 464?
2. How can I print user-defined characters without paper colour behind? I wish to be able to print multi-coloured characters.
3. Can a GX4000 be connected to run tapes such as Stryker which make use of the extra hardware?

**Paul Branney
Angus**

1. Dead easy. Let's say you want to save the values of the variables name\$ and price. You would use a line such as

```
OPENOUT "filename": PRINT #9,name$: PRINT #9,price: CLOSEOUT
```

Then to reload them, use this line:

```
OPENIN "filename": LINE INPUT #9,name$: INPUT #9,price: CLOSEIN
```

Speed it up!

I have recently finished a programming project, but my sprite routine is running too slowly, causing the sprites to flicker during screen refresh. Is there any way in which I can speed it up? The routine XORs what is on the screen with the sprite data.

**Michael Willmott
Splott**

First of all, are you sure that it's the fact that the sprite routine is too slow that is slowing the program down? The electron beam moves down the monitor, drawing the image as it goes, 50 times every second. If you are printing bytes in a certain area at the same time as they are being displayed, an unsightly flicker will result. To avoid this, synchronise your main program loop to start at the beginning of every frame, and arrange the printing of the different sprites so that this does not happen. You can perform the synchronisation by CALL &BD19, or (for speed):

```
.ff ld b,&f5
.ffl in a,(c): rra: jr nc,ffl
```

If this doesn't work, you need to fiddle with the routine. I had a look at the listing you sent, and there's not much you can do to it to speed it up. The only major alteration could be that,

As you can see, you use LINE INPUT to reload strings, and INPUT to reload numeric variables. You must load the variables in the same order that you saved them in, too!

2. Use transparent mode. To turn it on:

```
PRINT CHR$(22)CHR$(1);, with
```

```
PRINT CHR$(22)CHR$(0); turning it off.
```

3. With a bit of work, yes. Watch out for a hardware project coming soon to an AA near you...

Memory loss

I want to load the adventure game Colossal Caves which is a very large game. I loaded it up on my previous computer (a 464) with no problems. I then noticed that if I added a disk drive the game failed to load, displaying a message saying 'Memory full in 1328'.

I recently bought a 6128 and tried to load the game on this. I was surprised to see that it didn't load and gave the same message.

This didn't make sense, because how could a 6128 not load a game that a 464 could for lack of memory? Is there any way that I could load this large BASIC program into my 6128?

**K Baitson
Romford**

Both computers have 42k available for BASIC programs. The extra 64k of the 6128 is only available to machine code programs, and is really not much use in BASIC unless you use a program like Bank Manager (on the 6128 system disks).

instead of having a general-purpose sprite routine, it would be possible to write one for each size of sprite you're using. This way you could save on time by not bothering to preserve the previous line address and going down from that, but instead adding &800 minus the width of the sprite in your 'next line down' routine. You wouldn't need to preserve the sprite width using PUSH and POP, but could just set it up at the start of each row with a simple LD.

The only other possibility is to use a normal, instead of XORed, sprite routine. This way you can use the Z80's fast LDIR copy instruction, as in the following sprite routine (copies a sprite stored at HL to screen address DE, width BC and height A):

```
.sprite push bc: push de
ldir
pop de: ex de,hl
ld bc,&800: add hl,bc
jr nc,noovf
ld bc,&C050: add hl,bc
.noovf ex de,hl
pop bc: dec a
jp nz,sprite
ret
```

Incidentally, when I ran this article through a spelling checker, it offered 'Almighty' as a correction for your surname...

Whenever you use a disk drive on your CPC, the disk system (AMSDOS) reserves just over 1k of memory to keep a record of what disk drive you're using, and such things. This memory comes out of the space that you would otherwise use for BASIC programs, and is the reason why only a tape system has enough memory to use it.

However, if you disable AMSDOS, you will once again have enough memory. To do this, type in SAVE and run this listing:

```
10 MEMORY &7FFF: FOR n=&8000 TO &800F
20 READ a$: POKE n,VAL("&"a$)
30 NEXT: CALL &8000
40 DATA 21,08,00,3E,00,C3,16,BD
50 DATA 3E,C3,32,CB,BC,C3,06,C0
```

Printer pleas

1. Is there any way of saving a program when a cassette file buffer is too big for the remaining memory in the computer, and the Memory Full error is reported?
2. How can you tell through the computer if the printer is turned on?
3. Is it possible to change my black-and-white printer to colour?
4. How can you print large characters on a printer without a word-processor?

**Chris Morgan
Aldershot**

1. Yes. But not without a fair dose of machine code trickery to put the buffer in the screen memory. You'd also need to find out the length of the program, which is stored in a different place on all three CPCs.

Presumably you didn't write all the program in one go, so delete the bits that haven't been changed or added, and save the rest. You can then work on slimming down each part (eg by removing unnecessary spaces, inverted commas at the end of lines, and REM statements), and merge the two together.

2. If INP(&F500) AND 64 is 0, then the printer is on-line.
3. Probably not. It depends what make your printer is. You'd be best off phoning the manufacturers and asking them.
4. Your printer may have a built-in control code for enlarged characters (many Star printers do, for example).

Unfortunately, you'll have to read the manual to find out. Otherwise, you'll need to use the printer's graphics commands, which isn't a job for the faint-hearted. Again, read the manual for details (but remember that the CPC can't output printer codes above 127).

Short and sweet

In BASIC, how do I make the computer wait for a certain length of time?

**Edward Anderton
Devizes**

Just enter this line:

```
t=TIME: WHILE (TIME-t)/300<15: WEND
```

where 15 can be replaced by the length of time you want it to wait (in seconds).

Beginners' Questions

Data basics

My favourite hobby is train-spotting (don't laugh) and I keep the names and numbers of each train I spot, together with their type, where I saw them and when, using the Protext word-processor. However this is not too convenient, because I would like to be able to sort them by type and number to produce a good reference list. In addition, it is a real pain to try to find (for example) all the DMUs I spotted in 1992. Is there a better way to do it, or do I have to buy an IBM (as I have heard there are special train-spotting packages available for that computer)?

Keith Harbutts
Crewe

Protext isn't really the best program for your needs, as it was designed to be used to write letters, books, programs etc.—not to hold data. What you need is a database, the computerised equivalent of a card file, but a lot more powerful. Check out our feature on page 11.

If you don't want to spend too much money, you can use a PD database, such as Rambase 3 (for 128k machines) or PowerBase 2 (if you only have 64k). Both of these should be available at any PD library you can think of. For a really top-notch database, have a look at Masterfile 3. It's not cheap at £29.95 (from MJC Supplies, 0462 481166), but the range of features it provides makes it well worth it. Try out the PD programs first, and if they're not powerful enough, consider buying a copy of Masterfile.

Portable power

I am a freelance travel writer, but I'm not especially clued-up on computers. I bought a word-processing set-up based around an Amstrad CPC 6128, with an Epson LX800 printer and Protext word processor on disc. As you can imagine, it would be very useful for me to be able to directly type up my articles while abroad rather than having to hand-write them there and copy them into my CPC when I return home. Can I buy a portable 6128?

Mary Sleight
Barnet

Unfortunately not. Amstrad never attempted to squeeze a CPC into a small case — they only ever produced desk-bound models. However, you can buy numerous small word-processors, such as the notebook Amstrad NC100 and Cambridge Z88, and the even smaller Psion Series 3. Any small machine with an 'RS232 interface' will do. This is the important bit, as it lets the notebook link up with your CPC (when fitted with a similar interface). You can then just type in your article on the notebook, transfer it via RS232 to your CPC, and edit and print it in Protext there.

An independent computer shop will be able to guide you as to what notebook to buy.

For an RS232 interface for your CPC, try Siren on 061 724 7572. ●

Top Tips

Trace element

BASIC's TRON command can be very useful for debugging programs. However, if you don't want it to mess up your screen display, use the following listing (which should only be run once).

```
10 MEMORY &9FFF: FOR n=&A000 TO &A039: READ a$
20 POKE n,VAL("&"a$): NEXT: CALL &A000
30 DATA
3A,5A,BB,2A,5B,BB,32,28,A0,22,29,A0,3E,
C3,21,18
40 DATA
A0,32,5A,BB,22,5B,BB,C9,F5,FE,5B,CC,2B,
A0,CD,28
50 DATA
A0,FE,5D,CC,2B,A0,F1,C9,CF,FA,93,FS,CS,
DS,ES,01
60 DATA 00,07,CD,B7,BB,E1,D1,C1,F1,C9
```

Now define window 7 somewhere else on the screen (for example, try WINDOW 1,40,1,24: WINDOW #7,1,40,25,25 for the bottom line). Hey presto — all the line numbers displayed when TRON is in operation will appear in this window. (This goes for anything else in square brackets, too, so try to avoid them!)

For the technically inclined, this works by intercepting the character print routine at &BB5A. Whenever a square bracket is encountered, it switches streams between #0 (the usual one) and #7 (the TRON window).

Image problem

Let's say that you're developing a ROM program and you want to test it, using one of those rather natty RAM-ROM widgets, in as many ROM sockets as you can. Ok so far, but what happens if one of the sockets is already occupied on your ROM-board and you still need that ROM (e.g. ROMDOS or S-DOS)?

Easy. Disable that socket on the ROM-board, and feed the ROM into the other 16k of the RAM-ROM. To do this, you need an 'image' of the appropriate ROM — and here's a program to let you make one.

```
10 MEMORY &3FFF: FOR n=&8000 TO &8015
20 READ a$: POKE n,VAL("&"a$): NEXT
30 DATA DD,4E,00,CD,0F,B9,CS,21,00,C0,11,00,
4001,00,40
40 DATA ED,B0,C1,C3,18,B9
50 INPUT "Enter socket, filename: ",n,a$
60 CALL &8000,n: SAVE a$,b,&4000,&4000
```

This works by enabling the ROM in question, copying it down to &4000 in memory, restoring the previous ROM state, and saving the image.

Bug of the month

Reset your computer, and move the copy cursor (SHIFT and cursor keys) to the top left-hand corner of the screen. Now move the normal cursor straight up past it, causing the screen to scroll a little. Press ENTER. Strange. There are still two 'extra' cursors hanging about...

The Amstrad's built-in cursor facilities can be very useful for producing interesting text effects, writing input routines, etc. BASIC 1.1

users can use the CURSOR command, but to ensure 464 compatibility, try CALL &BB81 in a program to switch the cursor on, and CALL &BB84 to turn it off. Here's a little subroutine for all you BASIC programmers out there using the technique:

```
1000 'Print string (a$)
1010 CALL &BB81: FOR n=1 TO LEN(a$)
1020 PRINT MID$(a$,n,1);: CALL &BD19: NEXT
1030 PRINT: CALL &BB84: RETURN
```

A line like a\$="Mornington Crescent": GOSUB 1000 will then print the string, character by character, with a cursor. (To slow it down a bit, insert a few more CALL &BD19 commands in line 1020.) This makes on-screen instructions a bit more interesting, to name but one use.

Up with code

A quick assembly language subroutine to convert a character (code in A) into its upper case equivalent:

```
cp &61: ret c
cp &7B: ret nc
add &E0: ret
```

This is rather useful after keyboard input, to save having to test for both upper and lower case to see whether a specific jump is required.

Low

You get the latest, all-singing all-dancing, CP/M wonder-mega-program from your favourite PD library. Boot up CP/M and attempt to TYPE the instructions to the screen. No probs. So you run your AMSDOS word-processor, load the instructions, and are all ready to print when you realise something isn't quite right...

Many text files supplied with CP/M programs were prepared with a program, such as Wordstar, which sets the high bit of the last letter of each word (i.e. adds 128 to its ASCII code). CPC word-processors don't generally like this. Here's a program to convert them back into normal text:

```
10 INPUT "Original filename: ",o$
20 INPUT "New filename: ",n$
30 OPENOUT n$: OPENIN o$
40 WHILE NOT EOF: LINE INPUT#9,a$
50 FOR n=1 TO LEN(a$)
60 MID$(a$,n,1)=CHR$(ASC(MID$(a$,n,1))AND 127)
70 NEXT: PRINT#9,a$: WEND
80 CLOSEIN: CLOSEOUT
```

...and that's yer lot for this month. Don't forget, if you have any interesting serious CPC tips or questions then send 'em in to:

Technical Forum
Amstrad Action
30 Monmouth Street
Bath
BA1 2BW

Don't forget to mark your envelope 'Technical Forum' or those idiots in the office will think it's for them and everything will get terribly confused. ●

Type-ins

Oh no, it's that time again.
Put the cat out, brew some
coffee and settle down to
some serious typing in...

Posters Wide

First up this month is a positively wonderful program by Keith Evans of Kent (author of AA71 Type-In, Grid) that prints posters! But, roars the readership, haven't we already seen a poster printer? But this isn't just any old poster printer. It's menu driven, and can print text across the page in sixteen widths and ten heights. It prints black on white and white on black! Ladies and gentlemen, this program can take a whole page of text at a time and show you the appropriate A4 size page layout as you type your text in...

At the moment, the program is set up to work with Amstrad printers, so if you've got a different make, it's probably best to check the control codes in the following lines:

```
230 : Printer reset
910 : Printer reset
920 : Double strike
930 : Mini typeface
940 : Condensed
950 : 7/72 inch paper feed
```

Line 960 and lines 1010-1070 require a little further explanation. To print UDGs (User Defined Graphics) on an Amstrad printer, you must set DIP switch DS2-4 to the ON position.

Anyway... Where were we?

```
FACP 10:REM:POSTERS:WIDE:1991
EATJ 20:REM:KEITH:EVANS
FALN 30:MODE:0:GRAPHICS:PEN:5
GAIO 40:SYMBOL:255,1,1,49,73,73,49,1,1
JACE 50:SYMBOL:254,128,128,140,146,146,140,128,128
KAJJ 60:WINDOW:1,5,15,3,23:PAPER:1,0:PEN:1,5:CLS#1
CACM 70:GOSUB:830
CALJ 80:PEN:1,3,1
IAPO 90:LOCATE:1,3,4:PRINT#1,"Posters"
IACJ 100:LOCATE:1,2,6:PRINT#1,"<Wide-->"
CALG 110:PEN:1,6
JAJB 120:LOCATE:1,2,11:PRINT#1,CHR$(164);"By"
IAAD 130:LOCATE:1,4,13:PRINT#1,"Keith"
IANF 140:LOCATE:1,6,15:PRINT#1,"Evans"
GAOA 150:MOVE:128,32:DRAW:348,0
FAIL 160:FOR:n=1 TO:2000:NEXT
CAPP 170:GOSUB:830
FAJL 180:FOR:n=1 TO:1000:NEXT
DAMJ 190:DEFINT:a-z
IAKA 200:I$="You have selected"
EABG 210:DIM:pr(16,10,10)
DBPH 220:LOCATE:1,2,10:PRINT#1,"Please","pu
t your","printer","on line."
FAOK 230:PRINT#8,CHR$(27)+";"
DAHE 510:p=PEEK(n)
DAFN 520:p1=PEEK(n+1)
CANM 530:p1=p1/16
EAMN 540:a$=BIN$(256*p1)
FACE 550:C=VAL(MID$(a$,5,1))
ABMB 560:REM:*This bit prints big letters on
screen*
HADG 570:IF:G=0:THEN:PRINT:CHR$(128);
HACG 580:IF:G=0:THEN:PRINT:CHR$(143);
EAHK 590:PR(Lst,t,s)=G
CAII 600:NEXT:s
CAOF 610:n=n+c
CALI 620:NEXT:t
JALD 630:tb=tb+9:IF:tb>81:THEN:tb=1:CLS
PBJB 640:NEXT:Lst:CLS:PRINT"PLEASE WAIT...";
It's not my fault you've only got a small
printer buffer!"
FAFO 650:IF:ch1=0:THEN:ch1=64
DABM 660:FOR:t=1 TO:9
EACG 670:FOR:q=1 TO:ht
FAMI 680:FOR:Lst=1 TO:cpp
DAEM 690:FOR:s=2 TO:9
PADF 700:REM:*This bit sends data to your pr
inter*
NAGE 710:IF:PR(Lst,t,s)=0:THEN:PRINT#8,STRING
$(wd1,chr);
NAJH 720:IF:PR(Lst,t,s)>0:THEN:PRINT#8,STRING
$(wd1,chr);
CAMI 730:NEXT:s
DANG 740:NEXT:Lst
EAGK 750:PRINT#8,CHR$(13)
CAMI 760:NEXT:q
CABJ 770:NEXT:t
EAJI 780:PRINT#8,CHR$(13)
NAKF 790:cp=cp+cpp:IF:cp>LEN(T$):THEN:TB=1:CLS:
NEXT:a
BCHD 800:CLEAR:INPUT:MODE:1:PRINT"Will you w
ant to print:":PEN:3:PRINT:PRINT:t$:PEN
:1:PRINT:PRINT"again Y/N?":GOSUB:990
LAGF 810:IF:K$="y".OR:K$="Y":THEN:cp=1:tb=1:G
OTO:370
CAHK 820:GOTO:220
EBPP 830:LOCATE:1,1,21:PAPER:1,2:PEN:1,5:F
OR:a=1 TO:21:PRINT#1,CHR$(255)TAB(11)CHR
$(254);:NEXT
CAMJ 840:RETURN
```



Don't say we never give you anything. This is a really useful program and no mistake.

```
JALJ 240:ch=32:chl=64:cp=1:tb=1:ht=1:w=0
KADM 250:MODE:1:PEN:1:CLEAR:INPUT:GOSUB:860:P
EN:2
KEGK 260:CLS:PRINT"Enter MAXIMUM number of ch
aracters per printed line","Min=1--Max
=";:IO+w:PEN:3:PRINT:PRINT"Total amount o
f letters including space to be printed
per line across the page":PRINT:PRINT"i
e..GOOD-LUCK=9";:INPUT:cpp:PEN:1
OABC 270:IF:cpp<1:OR:cpp>w+10:THEN:SOUND:1,40
0:cpp:GOTO:260
NAPP 280:wd=INT((10+w)/cpp):IF:wd=1:THEN:wd1
=wd:GOTO:300
DDGD 290:PRINT:PRINT"You can have cpp charac
ters","with a width of up to times";wd"e
ach":PRINT:PEN:2:INPUT"Enter character p
rinted width";wd1:PEN:1:IF:wd1>wd:THEN:2
90
NBHB 300:PRINT:PRINT"Enter character height M
AXIMUM 10","PER A4 PAGE...((warning:10 i
s BIG))":INPUT:ht:CLS
KACG 310:WINDOW#2,23,cpp+22,10,20:PAPER#2,3:C
LS#2
HCED 320:PEN:2:PRINT"NOW ENTER YOUR TEXT Per
A4 page","(Including spaces)":LOCATE:1,1
5:PEN:1:PRINT"Approximate page--":LINE
INPUT#2,"",T$:PEN:1:
JAFI 330:CLS:FOR:dp=1 TO:LEN(T$):STEP:cpp
JAHG 340:PRINT:MID$(T$,dp,cpp):NEXT:dp
BBDO 350:PEN:3:PRINT:PRINT"IS THE ABOVE
CORRECT Y/N":PEN:1:GOSUB:990
IACE 360:IF:K$="N".OR:K$="n":THEN:GOTO:230
EALP 370:FOR:A=1 TO:LEN(T$)
EADP 380:B$=MID$(T$,CP,CPP)
CADD 390:MODE:2
FACI 400:FOR:Lst=1 TO:cpp
EAKO 410:C$=MID$(B$,Lst,1)
HANC 420:IF:C$="" THEN:d=32:GOTO:440
LAKP 430:d=ASC(C$):REM:*Text translated now
CAGC 440:c=2048
DAPB 450:LOCATE:1,1
EANB 460:PRINT:CHR$(d)
LAMJ 470:n=-16384:REM:*1st screen location*
DACM 480:FOR:t=2 TO:9
EALA 490:LOCATE:tb,t
DAJL 500:FOR:s=2 TO:8
```



It's well executed and incredibly easy to use. All you need now is something to advertise.



Similarly, this just looks like a load of dull squarish shapes, but wait till you see it work.

```
JAKN 2030·DATA·180d78fe0bc8d8327a803d3d,4ec
JABG 2040·DATA·327e802100007eb7c8cd5abb,530
JAFc 2050·DATA·2318f71f110d201f110df200,2be
IANL 2060·DATA·1f180d201f180df300000000,19b
IAKc 2070·PRINT·Error·in·line·;1
```

Animator

We see a lot of tosh here in Type-Ins, folks, but every now and again, a truly excellent demonstration of a simple technique comes along that knocks us all flying. So the award for excellent usage of an old technique goes to Jonathan Page of High Wycombe for his truly excellent palette switching demo.

```
GABA 10·REM·The·Animator
CAcL 20·REM·1/1/93
CABB 30·INK·0,0
CAcJ 40·BORDER·0
CANE 50·PAPER·0
BAMP 60·MODE·1
BALL 70·PEN·1
CAPB 80·INK·1,8
DACC 90·LOCATE·12,2
HADf 100·PRINT·"THE·ANIMATOR·MENU"
BAHO 110·PEN·2
CAGH 120·INK·2,21
DAEF 130·LOCATE·15,6
GAET 140·PRINT·"1.·Snowdown"
HAJf 150·PRINT·TAB(15)"2.·Fountain"
HAJ1 160·PRINT·TAB(15)"3.·Sparkle"
HAEX 170·PRINT·TAB(15)"4.·Rotator"
GAOL 180·PRINT·TAB(15)"5.·Tubes"
CAHE 190·PRINT
GAJE 200·PRINT·TAB(15)"0.·Exit"
BAHO 210·PEN·1
DAEF 220·LOCATE·5,16
OANE 230·PRINT·"Use·Space·to·exit·each·animat
ion"
DAFF 240·LOCATE·2,18
PAHN 250·PRINT·"Use·keys·Z,X,J,\·to·control·a
nd·Return"
OAGC 260·PRINT·TAB(6)"to·animate·in·programs·
3·and·5"
BAPO 270·PEN·3
CADI 280·INK·3,26
DAII 290·LOCATE·14,22
HALW 300·PRINT·"Public·Domain"
CABE 310·PRINT
KAKA 320·PRINT·TAB(12)"By·Jonathan·Page."
DAMB 330·a$=INKEY$
GANL 340·IF·a$="0"·OR·a$="5"·THEN·330
EADO 350·IF·a$="0"·THEN·END
CAOC 360·MODE·0
DAOP 370·FOR·a%=1·TO·15
CAFP 380·INK·a%,a%
BALP 390·NEXT
IAHP 400·ON·VAL(a$)·GOSUB·430,610,780,1050,12
70
```

```
CAEH 410·GOTO·60
FAJB 420·REM·Snowdown
BAML 430·s%=0
EACD 440·x%=RND*1280*640
CAIC 450·y%=400
EALI 460·c%=INT(RND*15)+1
EANJ 470·xi%=(RND*5)+1*4
EAMM 480·yi%=(RND*5)+1*4
EAND 490·PLOT·x%,y%,c%
CAOF 500·c%=c%+1
EAGP 510·IF·c%=16·THEN·c%=1
DAPF 520·x%=x%+xi%
DADG 530·y%=y%+yi%
HAGA 540·IF·x%<640·AND·y%>0·THEN·490
CADI 550·s%=s%+1
EAGN 560·IF·s%<100·THEN·440
BAJO 570·c%=26
DAJC 580·GOSUB·1560
CAOJ 590·RETURN
EAOP 600·REM·Fountain
DAKP 610·FOR·a%=1·TO·50
DAEI 620·x=320:y=200
EAKI 630·c%=INT(RND*15)+1
EADB 640·xi=RND*15-7.5
DAJX 650·yi=RND*10+5
DAMO 660·PLOT·x,y,c%
DAOH 670·yi=yi-0.5
CANP 680·x=x+xi
CALP 690·y=y+yi
CAAG 700·c%=c%+1
EAIP 710·IF·c%=16·THEN·c%=1
IAML 720·IF·x%>0·AND·x%<639·AND·y%>0·THEN·660
BAJP 730·NEXT
BACO 740·c%=11
DAIC 750·GOSUB·1560
CANJ 760·RETURN
EAEJ 770·REM·Sparkle
BAFL 780·c%=1
DAMI 790·x=320:y=200
DAPI 800·xi=0:yi=0
BAPK 810·dx=0
DAGC 820·GOSUB·1470
DAOM 830·FOR·a%=1·TO·5
IAOD 840·PLOT·x+RND*20-10,y+RND*20-10,c%
BAMP 850·NEXT
CAJG 860·dx=dx+1
EABH 870·IF·dx<5·THEN·910
BAGL 880·dx=0
CAKJ 890·c%=c%+1
EAJP 900·IF·c%=16·THEN·c%=1
HAGE 910·IF·INKEY$<CHR$(13)·THEN·820
DADM 920·RESTORE·1030
DAPM 930·FOR·a%=0·TO·6
DAIF 940·READ·c%(a%)
BANP 950·NEXT
BACL 960·a%=0
CAFG 970·a%=a%+1
EAMN 980·FOR·b%=a%·TO·a%+6
GANL 990·INK·(b%·MOD·15)+1,c%(b%-a%)
CAAC 1000·NEXT
GACC 1010·IF·INKEY$<""·THEN·970
```

Aaargh!

Now I know we're being picky here, but there are just three more things we'd like to say about people sending in programs for inclusion in these pages:

1 Please, please don't send in paper print-outs, unless your program is very short. We honestly don't have time to type in loads of mammoth listings, and your hours of hard work just hits the recycling bin with a dull thud.

```
CADM 1020·RETURN
EAAP 1030·DATA·0,4,1,9,12,15,3
EAEN 1040·REM·Rotator
GAAJ 1050·FOR·x%=40·TO·639·STEP·40
FALI 1060·GRAPHICS·PEN·x%/40
GAAG 1070·FOR·y%=0·TO·399·STEP·20
DAOC 1080·MOVE·0,200
DAPJ 1090·DRAW·x%,y%
DAAJ 1100·DRAW·639,200
CACC 1110·NEXT
CADC 1120·NEXT
EAKC 1130·FOR·a%=2·TO·15
DAIC 1140·INK·a%-1,0
FAIK 1150·INK·a%,INT(RND*25)+1
FAFK 1160·FOR·b%=1·TO·50·NEXT
CAIC 1170·NEXT
HANC 1180·IF·INKEY$="."·THEN·RETURN
GAIA 1190·FOR·a%=14·TO·1·STEP·-1
DADC 1200·INK·a%+1,0
FAFK 1210·INK·a%,INT(RND*25)+1
FACK 1220·FOR·b%=1·TO·50·NEXT
CAFC 1230·NEXT
HAKC 1240·IF·INKEY$="."·THEN·RETURN
DAGA 1250·GOTO·1130
DAAP 1260·REM·Tubes
DAKL 1270·x=320:y=240
DACM 1280·xi=0:yi=0
BACO 1290·c%=1
DAAF 1300·GOSUB·1470
HAGA 1310·s%=SQR(xi*xi+yi*yi)
EACD 1320·GRAPHICS·PEN·c%
EAOB 1330·MOVE·x,y+s%
EAGB 1340·DRAW·x+s%,y
EAJB 1350·DRAW·x,y-s%
EAKB 1360·DRAW·x-s%,y
EAJB 1370·DRAW·x,y+s%
DAAG 1380·MOVE·x,y
CAML 1390·FILL·c%
CAOI 1400·c%=c%+1
FAGC 1410·IF·c%=16·THEN·c%=1
HANJ 1420·IF·INKEY$<CHR$(13)·THEN·1300
BAFO 1430·c%=8
DAFF 1440·GOSUB·1560
CAKM 1450·RETURN
HAFH 1460·REM·Control·System
HAGL 1470·xi=xi+INKEY$(63)-INKEY$(71)
HAGL 1480·yi=yi+INKEY$(19)-INKEY$(22)
FANJ 1490·x=x+xi:y=y+yi
GAHL 1500·IF·x<10·THEN·x=10:xi=0
HAKD 1510·IF·x>629·THEN·x=629:xi=0
GAML 1520·IF·y<10·THEN·y=10:yi=0
HAFE 1530·IF·y>389·THEN·y=389:yi=0
CAKM 1540·RETURN
HAJH 1550·REM·Colour·cycling
BAAO 1560·a%=1
FAEA 1570·INK·(a%·MOD·15)+1,0
CADJ 1580·a%=a%+1
FAOF 1590·INK·(a%·MOD·15)+1,c%
CACF 1600·FRAME
GAFF 1610·IF·INKEY$<""·THEN·1570
CAJM 1620·RETURN
```

2 Don't expect to see your program appear immediately. We get a lot of programs each month, and we can't promise to sort them all out immediately. If you wait a while, your program will probably see the light of day, but please be patient.

3 Because of this time period, we can't promise to return discs immediately either, but once again, if you're patient, it should turn up.

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United We Stand

Just who are the UAUG? An animal rights group? A right wing militant faction? A censorship committee? An independent CPC user group? We sent Simon Forrester to dig out the truth.

As we all know, quite a few people read **AA**, and in many ways, we're just a big user group. However, we're not the only ones. There are

many other non-commercial magazines out there, each with their own following. One of the larger organizations that you'll have no doubt heard about is the United Amstrad User Group.

So what are they? Well, they have several strings to their bow:

A Magazine

Probably the most obvious side to the UAUG is their bi-monthly publication, *CPC User*. It's in a fairly chunky 30 page A4 format, with the emphasis on content rather than graphical fancy work. That's not to say it's not appealing to look

at though – the pages are all arranged nicely, but there is a satisfyingly large amount of text as well. Speaking from a fellow writer's point of view, the magazine is nicely written, with a clear and informative style. As for actual subject matter, you'll find it as wide and varied as **AA**, with technical help, adventuring, etc.

Obviously there are some down sides to the magazine in comparison to full commercial offerings, but these are compromises in production, not content, and the quality isn't massively affected.

A Discount Scheme

One bonus of membership that'll appeal to a lot of people is a rather nifty discount scheme. The way it works is simple. If you're buying software/hardware from a participating supplier, simply belonging to the UAUG can get you massive discounts on certain products. Looking through the range of offers available, it's clear to see just how well the scheme works. Some companies are offering up to 30% discounts on some titles.

A PD Library

And so the group branches out yet again with two (yes, two) public domain libraries. The first is a tape library, and the second supports discs. This seems like quite a nice arrangement, as the PD scene is legendary for hating tape users – reproducing a PD collection onto tape takes aeons (about 60 times longer than a disc).

A Book Library

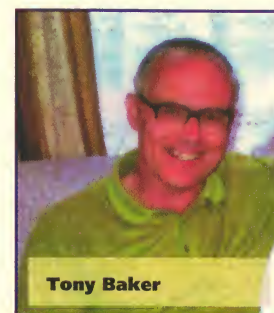
Now here's something new. It's very rare that a user group will have a book library, but the idea is a very good one. After all, why shell out lots of cash for expensive reference books, when you could just send off for the book you want, take the information from it, and send it on back! That's the beauty of having a smaller group, you see – you can run schemes like this effectively.

Helplines

Another excellent benefit from joining the UAUG is the vast array of people who can be contacted for help in a particular field. As a service, this could prove invaluable to many readers who are having problems with an aspect of their computing, and have no-one else to seek out for advice.

Who's who

Of course, an organization like this takes a lot of manpower, which is where the individual figures in the group come into play. We spoke to some of them, to find out who they are, how they help the UAUG, and what they hope to do in the future with the CPC.



Tony Baker

First, we have Tony Baker, the chairman of the whole organization, who keeps everything on course and running smoothly:

I joined the UAUG after seeing a leaflet in my local computer store. Within a few months I became Distribution Officer (distributing *CPC User*), and was then talked into taking over as Chairman.

As my address and phone number is used in all our publicity leaflets and magazine adverts, most new members contact me for further details. I try to answer all queries by return of post, as I know how annoying it is to be kept waiting a long time for replies.

My other official duty is to call meetings of our Committee, and then send out copies of the Minutes to all officers. I also receive the master copy of each issue of *CPC User*. I deliver this to the school that does all our printing, and then later collect the 400+ copies and hand them over to Alan Stead for distribution.

My unofficial duties arise from the fact that my phone number reaches all parts of the world via the computer press. I have had phone calls from as far away as Australia and California.

Next up, there's the executive editor of the magazine, Steve Hayward:

I was very pleased with my choice of computer, and spent many years playing games and doing the odd bit of programming.

Like many people, there came a time when my interest in game playing waned. Consequently I didn't touch the computer for a while. Over a year in fact. Then one day I started messing around with it again, and I was hooked, but this time more on the 'serious' side of things. I bought a second hand add-on disc drive, then a printer, and then even more!

It was around this time that I saw a few adverts for the UAUG in various magazines. I'd seen them before, but hadn't really paid much attention to them. This time I sent off for an info sheet and application form.

To be honest, it looked just a little too good to be true. There were a lot of benefits in being a member, but the membership fee was only £7 (which means that it has only risen by £1 in all these years!!). I decided to take the plunge, joined and never looked back.

I was a 'normal' member for around a year,

content to sit back and enjoy what the Group had to offer. Then the position of Advertising & Publicity Officer became vacant, and I applied for the job. It seemed a natural extension to my hobby, and also the ideal way to put something back into the Group.

I enjoyed this post for quite a few months, and when the editorship of *CPC User* (the UAUG's magazine) came up I applied for that as well.

I've been the editor of the magazine for nearly two years now, and can truthfully say that although it has been hard work, it has also been a lot of fun to do.



Richard Duggan

From the PD library side of things, we spoke to Richard Duggan, the man behind the cassette public domain section of the group:

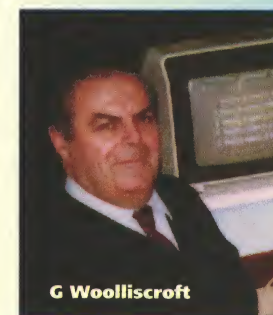
I had always been interested in computers and when the family had a small win on the pools in 1987 I bought my Amstrad 464. Gradually I've been able to upgrade it and now 6 years on I've got a 6128 capacity machine which has a switch so I can run it as a 464 also. I was fortunate enough to find an expert to do this for me. I now have two Rombo boxes with seven ROMs my favourite being Protect. I also have a DD1, FD1 and 3 1/2 inch disc drives, some other favourite pieces are Video Master and a Multiface +2.

For over three years now I have been a member of the United Amstrad User Group and when the post of PD Tape Librarian became vacant in October 92 I applied for the job and got it! I feel that it's allowing my hobby to go one step further.

The tape library was well established and organised by my predecessor Gordon Woolliscroft, who is now our Membership Secretary.

Since taking over I have been in contact with various other PD libraries both in this country and abroad and have been fortunate to

obtain quite a large amount of extra PD for our library. Bernard Egerton, our new Technical Editor, also donated numerous PD from his own library 'Egerton PD' tape only. He



G Woolliscroft

Prize Draw

The UAUG have just announced that any new members that join between now and the end of June '93 are automatically entered into a prize draw, in which they could win various assorted goodies, such as software, further subscriptions, even more discount vouchers, and even a years subscription to **AA**! So there has never been a better time to join!

has also adapted a lot of disc PD to tape so now our library is overflowing!

As tape loading can be a long procedure, I now offer tape speed loading to all members, this appears to be quite popular.

Finally, we spoke to the current membership secretary, Gordon Woolliscroft, who, though not regularly contributing any written work to *CPC User*, deals with any membership problems.

About 2 years ago after an appeal by our chairman I took over the job of membership secretary, a post which I still hold, dealing with all aspects of membership as well as other queries which seem to come my way. From time to time I do contribute articles and small items to *CPC User*.

Membership

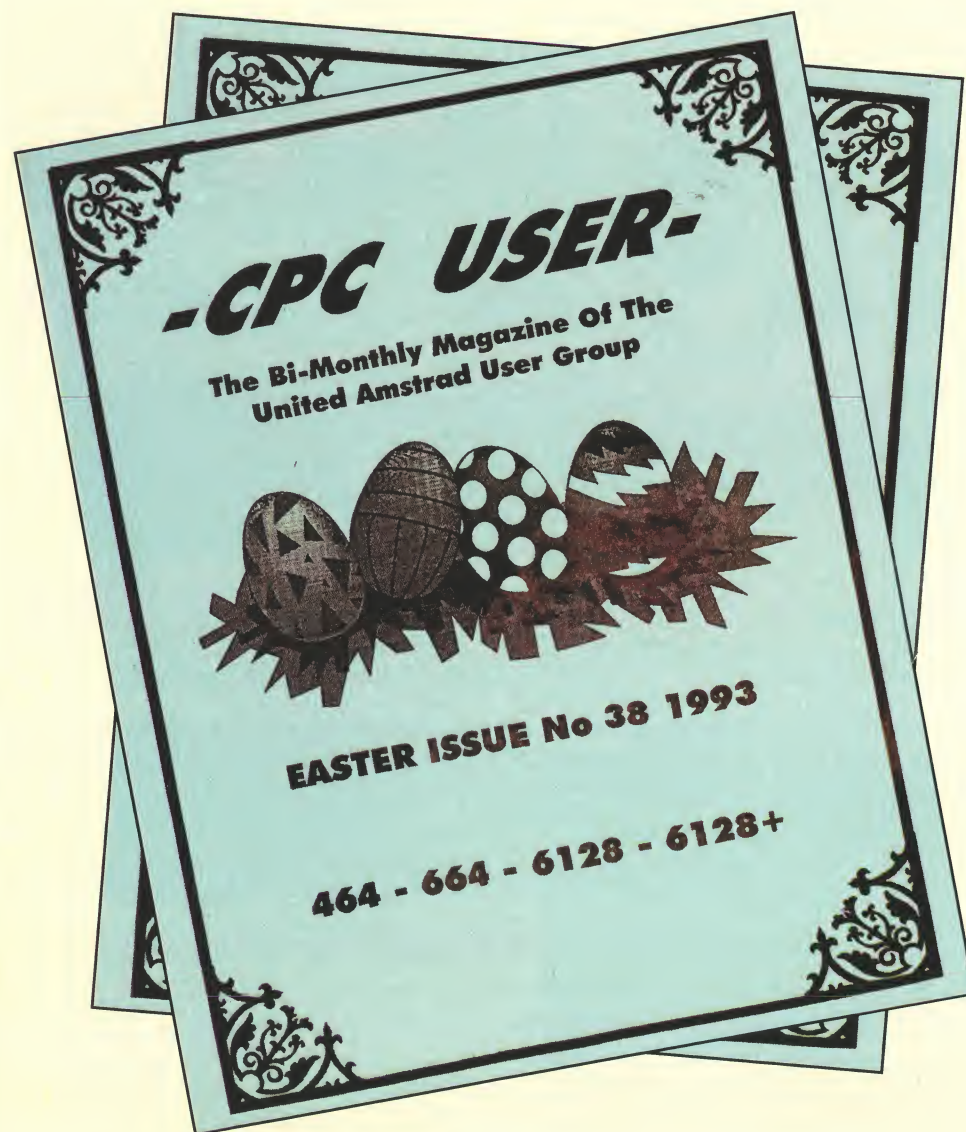
So, in summary, we have a nicely rounded organization, run by people who are dedicated to both their machines and the members of the group. So should you join?

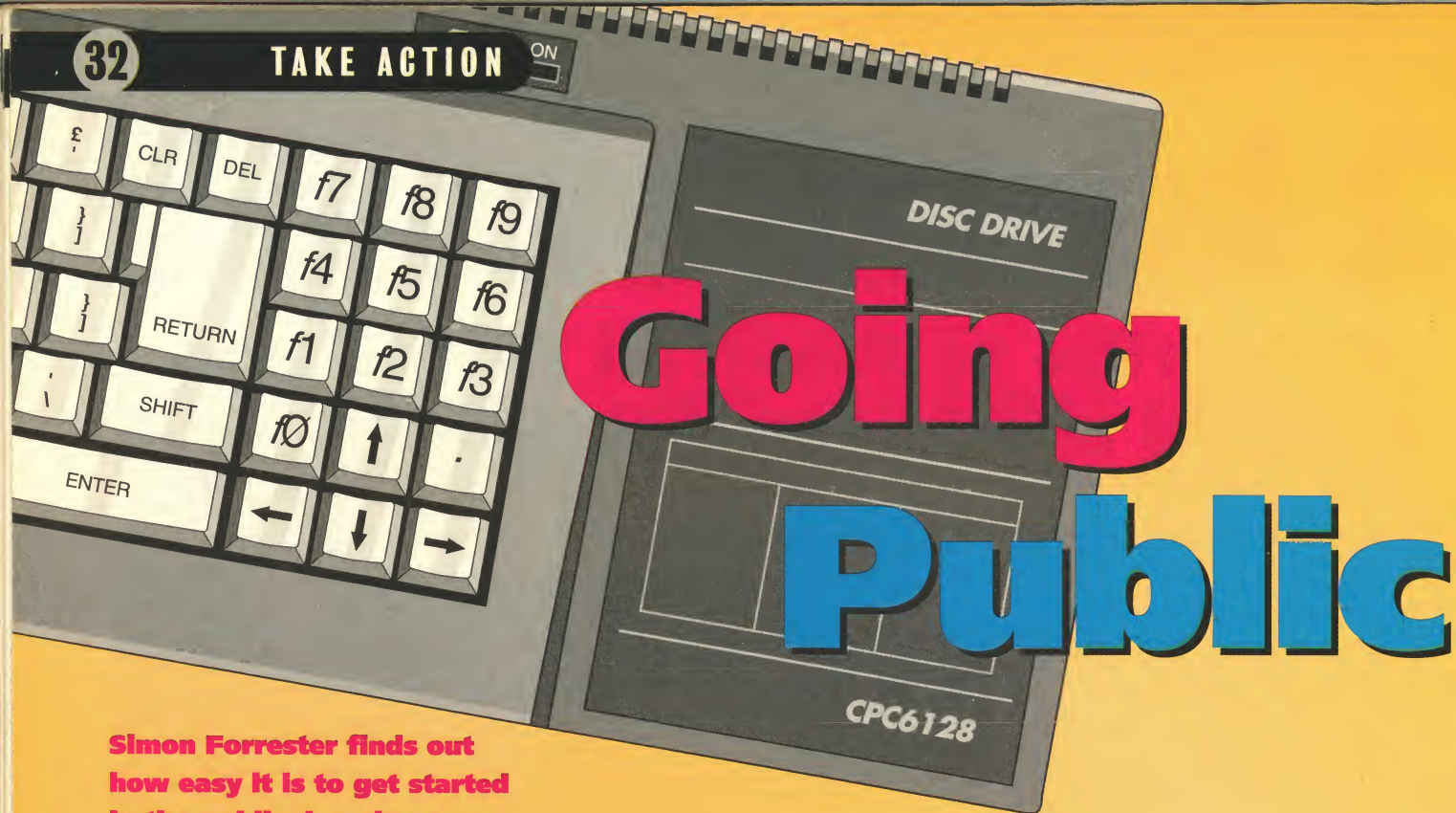
Well, membership is inexpensive to say the least. Rates start at £8.00 for one year's UK internal subscription, which will entitle you to the bi-monthly magazine, free access to the PD library, the commercial discounts, etc.

All in all, we were very impressed with the UAUG. The service they offer would be invaluable to any CPC user, and though the magazine is geared slightly more toward the serious side of CPCing, games players should find enough in the organization to warrant a measly eight quid for membership. So if you're tired of just reading **AA**, why not take out a subscription to the UAUG as well? Quite frankly, with independent support as thorough and as well organized as this, the CPC looks to have a very strong future in the hands of the users. The UAUG definitely receives the **AA** stamp of approval. ●

Contact

Gordon Woolliscroft
2 Wrenbeck Drive
Otley
W. Yorks
LS21 2BR
☎ 0943 463718





Simon Forrester finds out how easy it is to get started in the public domain scene.

Last month we told you that there are three main reasons why you should give your work to the public domain circuit.

- Your software isn't really up to the standard of full commercial sale.
- You don't really want to enter into the hassle of selling it yourself, and you couldn't find an interested software house.
- You're one of those people who believes in good quality software for the general CPCing masses, at very low prices.

Due to the death threats on behalf of most of the PD fanatics who violently disagreed with the first two points, we're going to assume for now that all PD software is high quality work submitted due to the milk of human kindness.

All this is totally irrelevant, though, if you don't have a library to give software to. So what can you do? Why not start your own...

Why not indeed?

As many seasoned library owners will tell you, there are two ways your average PD library can go. If the library is run by a reasonable programmer with contacts on the scene, it will have a few of the classic PD titles, and a large amount of original, unseen, (and maybe imported) titles. These original libraries become successful very quickly, and soon accumulate

their own following, and a good reputation.

Then, of course, there are those libraries that are started by people who, enthusiastic though they may be, have no original titles to introduce. This situation is dangerous. If you stock your library entirely with titles from other libraries, you will have no major attraction, unless you do something very special with the price (see 'No Charge?'). So if you do plan to start up a PD library, make sure it has something unique to stop it sliding into obscurity.

What do I do?

Good question. The first step is to devise some sort of rough system that your library will run with. There are several decisions you'll have to make to decide the style of your library. First, are you going to copy discs and/or tapes? Most PD libraries worth their salt work with disc software, but do you have the time to copy tape software? Copying a disc's worth of software onto tape would probably take half an hour, whereas duplicating a disc will take two minutes or so.

But how much are you going to charge? Take a look at 'No Charge?' for full details on how to charge people for free software. (No, I don't understand that either. - Ed)

And what software are you going to stock? There are some libraries who'll stock anything and everything, but there are also many libraries

that deal within a specific area, such as adventure games, business software, arcade games, demos, etc. It might be wise for you to start off in a previously unexplored category until you make a name for yourself, and then expand into other areas as you see fit. Also, as a specialized library, you'll suffer very little competition, and you should be successful very early on.

Of course, it's no good having a library if no-one's even heard of you, so publicity is vital to get Joe Bloggs PD off the ground. There are several places you can do this, such as CPC User (the UAUG magazine), WACCI, and, of course, Amstrad Action. Now, I can't speak for the other organizations, but as far as AA goes, there are three ways to get publicity:

- Take out a Small Ad - being free, there's no reason why you shouldn't cut out that little coupon and get your free plug. The advantage here, of course, is that you get to word the advert to your best advantage.
- Inform the Amscene news desk - of course, you can't word the piece, and you do fall prey to the cutting sarcastic wit of whoever deals with the item, but a few more people read Amscene than read Small Ads.
- Send it along to Tim Blackbond at Public Image - bear in mind that it's probably best to appear in Public Image after you've got a reasonable collection of titles together.

And what's next?

Well, assuming you've got your software collection (by either writing it, getting friends to write it, or collecting it from other libraries), you need to compile a catalogue (your list of titles, along with a brief description of what each one does). This is done in one of two ways. First, you could word process your list and photocopy it, allowing you to present it easily, or you could write a disc catalogue, which is roughly the same thing except on a computer screen (allowing you

Almost PD

When is PD not PD? When it's 'Almost PD'. What's 'Almost PD'? Simple. It all started with rogue libraries starting up and simply stocking software from other libraries, but charging ludicrous prices, making a profit from what was entirely other people's work. The programmers and established library owners countered this with a rather drastic measure. 'Almost PD' is software that, by demand of the

author through copyright entitlements, can only be stocked in libraries of the authors choice.

Whether you approve of this or not (I rather think I don't), you have to see this from the programmer's angle. Why should someone spend time writing high quality software, and then donate it to the public domain, just to see someone else make ludicrous amounts of money out of their hard work?

No Charge?

There has always been debate on the subject of money for PD software, but the way we (and most library owners) see it is like this:

Running a PD library takes a lot of time and effort. Duplicating the software and compiling the collections is a lengthy, time-consuming process, and so it's only fair that users of the library are expected to pay a nominal fee to cover the efforts of the library owner.

This fee should not, however, be all that

large. If you're considering charging anything over one pound, don't. Look around at established libraries, and see what they're asking for, and you should get a rough idea of what to charge.

If your collection is going to consist entirely of other people's titles though, you'll need to charge a great deal less than the libraries currently stocking the software, or you will, in effect, just be ripping the customers off.

Rapid growth

So you've got your library whizzing beautifully along. What now? Well, you can't stock the same titles forever. Sooner or later, you'll need to expand your collection. The easiest way to do this is to make it known in your publicity run that you're willing to accept contributions from the general public, and in return you'll give them, say, a free disc of your software, or something along those lines.

Many libraries find that they expand from the very start, and have to make no special effort to encourage contributions. There's no shame in having to put out a plea for titles, though - it's all publicity, and it allows you to be a little more selective in what's sent your way.

Why bother?

If you're having second thoughts about whether to do this PD thang, then good. It's not something you should enter into lightly - if you start a library, take orders, and fold, all those little Billy's and Johnny's won't be too happy with you not returning their discs or their money, and quite rightly so. You should ask yourself two questions before diving head first into this thing:

- Is it worth my time? Well, financially, running a

Copy Cat

Oh dreary me. It's that age old subject that I have to put in the feature just in case someone doesn't know yet.

Copyright

You automatically own the copyright to anything you write. If you wish to donate something to public domain, it must be your own work. The only person who can declare something public domain is the copyright owner. Simple as that.

When a title is in the public domain, a certain degree of protection still follows it. Although the program can be freely copied, it can't be altered. Any attempt to alter it is an infringement of copyright. Nor can it be dissected. You can't use a routine from a PD program in your own software without permission from the author. Nuff said.

library is never going to be all that rewarding. But you will benefit in other ways. For one thing, you'll develop a large network of contacts and CPCing friends through your efforts - it would be quite hard not to.

- Will I be adding anything new to the PD scene? There are too many libraries out there that are just stocking a rough assortment of everybody else's stuff under their own name. Why? No-one's rightly sure, but it's obvious that there's not much point to the exercise.

Grow your own

All in all, running a PD library can be fun. It's probably the easiest way to get involved with the CPC scene, so give it some serious thought. The future of the CPC lies, in a way, at a home grown level, and that relies on enough people getting off their backsides and giving things like this serious consideration, and perhaps even a try. Come on, what have you got to lose? ●



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Public Image

Here comes that Tim Blackbond bloke again to tell you what's hot and what's not in the twilight world of the public domain.

The public domain 'industry' is now even more booming than ever before. There are several new top-notch games (too many to review in this space, although check out the Puzznix review, clearly the best of the bunch).

There have also been rumours that the game Axys reviewed a few issues ago is not public domain - we'll keep you informed.

Mailbag

The number of letters increases with every passing month - it's good to see that so many people are interested in the PD scene.

If you have any questions, opinions, rants, or just want a bit of a PD-related chat, then this is the column to write to.

Just keep scrawling your thoughts onto letters and postcards and send them to:

PUBLIC IMAGE
Amstrad Action
30 Monmouth Street
Bath, BA1 2BW.

I thank you...

3.5" PUBLIC DOMAIN

In the Ask Alex column in a recent (Recent???? - Ed) issue of Amstrad Action, Alex said that PD libraries can copy their software onto 3.5" disks. Although she said this, she didn't give any examples of libraries that do. Could you please give me some?

Thank you!

Duane Saunders
Essex

You'll find that most libraries offer software on the larger capacity of the 3.5" disk, the only difference between them is the format of the actual disk. Domain PD gives software on ROMDOS format while Presto PD offers a service for users of MS-800.

Ask around the libraries to get the one that suits your needs.

More PowerPage probs

Can you tell me how to convert pictures drawn with GPaint into clip art for use with Stop Press or PowerPage? There are several PD utilities to view clip art, but none to convert files to the .CUT format. Maybe, with your help, I can get back to designing pages with more than just the readily available clip art on them...

Chris Hunter
Bradford

Loose Talk

Gullam returns

After the sad death of Presto News, Matt Gullam has spent most of his time trying to organize a disk-fanzine system. After one failure, Matt has managed to twist the arm of our very own Richard Fairhurst into coding a machine code system that will whip the bottoms of the European disk-fanzines, and not before time. British disk-zines have been a great source of amusement for the CPC groups on the continent ever since CPC Domain.

Better Than Life, as it will be called (not to be confused with the Red Dwarf fan club magazine), will feature all the usual articles the population of Britain had come to expect from Presto News plus a lot of new columnists. We are waiting with silent excitement...

Databases and stuff

My brother and I have been satisfied users of an Amstrad CPC 6128 for just over six months now and we have only just discovered the joys of Public Domain (thanks to your column in Amstrad Action and Artificial Intelligence). However, could you tell me if there are any decent database and spreadsheet programs anywhere in the Public Domain? I am soon to do them as part of Information Technology at school, as well as needing a database to store my library of telephone numbers.

Mark Broadfield
Surrey

In the way of databases, there are a choice of two quality programs: Rambase 3 by John Fairlie and PowerBase by Richard Fairhurst, the best of which being Rambase 3, because of it's ability to store all records in the second 64K bank of the 128K memory, it allows larger files and also offers the widest range of options.

As for the Spreadsheet, go for PD Planner by Paul Derryhouse. Again, this is the QE2 in sea of a mediocre 'competitors'. Most libraries (if not all) stock both of these programs, so you should have no trouble finding them.

Software

This month we have two games imported from 'The Continent' by Matt Gullam and are available on the same disk in Presto PD. Both games aren't exactly oozing with originality, but at least one of them is enjoyable to play...

PUZZNIX

By The Fraggle
Available on: Presto PD (Games 15) and PD FUN (Games 17)

I'm afraid I can't really offer any points for anyone who can guess what this game's based on. Does anyone remember Puzznic? For those who do, you would be best advised to save time by skipping straight to the final paragraph...

The game concept is simple (isn't it always with puzzle games?), but difficult to explain. When

Send it in...

If you've read pages 22-23 of this issue, you'll have had a whole wad of information on how to set up your own library. Though I don't want to repeat what's already been said there, I'd just like to give a bit of advice to anyone planning to send PD software in.

- Don't feel afraid to send your work in! I'll quite happily look at any amount of software, good and bad, and review everything on its good points.
- Send software on tape or disc, not paper printout, as I really don't have time to type them all in.
- Send a stamped, self addressed envelope along if you want your disc returned.
- Always state a PD library that your software is definitely available from.
- It's not worth bothering to phone before you send material in - I'm a freelancer and I don't

work in the **AA** office).

- Demos are getting more than a little tired.
- It's not worth sending in software that everyone has already seen.
- If you're sending a game, try to include details of hidden cheats, solutions, etc, as they'll receive a more in-depth review if we can play them more deeply.
- We'll give coverage to any new library with something to offer, or any library looking for software.
- If you have any news for the column, please feel free to send that along as well.

So don't ever be fooled into thinking the PD scene is a clique thang. If you have any slant toward PD, we want to hear from you. The future of the CPC lies in AA, so it's in your best interests to support it.

the game starts you're presented with a screen of bricks. Not full of bricks, but enough to build a small out-house with. Anyway back to the bricks. Each of them is marked with a different symbol and they can be moved about.

There must be more to it

Yes, there is a bit more to it than that. When two or more identical blocks are placed next to each other, they disappear. In order to complete a level, and progress to the next, every block must be cleared by the same method.

And, to add just a li-i-i-ttle bit more difficulty to the game, the bricks comply with the law of gravity (this shouldn't need to be explained, really - it has something to do with apples), so unsupported blocks will fall until they land on a solid surface, throwing a level that you thought you had sorted out into complete chaos.

That sounds easy...

Let's not bother with any of this clichéd 'sounds easy' crap, because it isn't. If there are three blocks of the same symbol on the screen, they all have to go at once, making it difficult to position them so that you aren't left with one on screen and nothing to match it with. If such a thing does happen, you have to restart the level (or, alternatively, smash your computer in a fit of uncontrollable rage).

Since you only have four chances to retry (and when these have gone, it's right back to square one) and bearing in mind that there's also a strict time limit, I'd fully expect you to have a completely wrecked machine in a matter of mere minutes.

Hurrah for PD

Against the full-price version, *Puzznix* stands up very well (especially if you rest both the disks to form a triangle on a gripping surface...). In fact, it is far, far superior to the one that you would have to pay £15 for.

Not only have you got prettier graphics (what with a range of backgrounds for each level and a

snazzy game over sequence, not to mention the *Turrican 2*-like screen-clear method) but there is also a screen designer. If you are smart enough to finish the levels given to you (or not able to get past level one), you can have a go at designing your own devilishly difficult game, all the better to win friends and influence people... *Puzznix* pokes a finger in the eye of *Puzznic*. Smashing PD fun!

91%

PLUMPY

By Mickael Fauquet

Available from Presto PD (Games 15)

Much like *Puzznix*, *Plumpy* is based on another old game, *Bubble Bobble*. In the original game, you had to control one of two dinosaurs trying to kill all the baddies on each screen by trapping them inside a bubble and then bursting it. The original plot and made the game enormously successful, so much so that a sequel and a third part was written, also enjoying commercial success. The PD 'copy' however, has sadly been stripped of all gameplay and what you are left with is an over-easy platform run-around with no real goal.

It's behind you

Whereas the original game had several nasties per level, *Plumpy* has only got two. One chases you from your start point and with one swift U-turn and a jab of the fire button you can get rid of it with no problems. The second paces back and forth along the bottom of the screen, the only puzzle being how you can get to it before it gets to you.

Is that all there is to it?

That is, indeed, all there is to it, after a few games the concept will become so dull that you have no option but to turn your machine off in a fit of rage. Oh well, *Puzznix* will keep you up at nights...

EVEN MORE LEVELS FOR YOUR MONEY...

The Presto PD version of *Puzznix* comes with the original levels, however, if you manage to get through these PD Fun has specially designed a new set of fiendishly difficult puzzlers...

ROGUES GALLERY

Yes! As promised many 'moons' ago, the Gallery has returned, and this month we have the librarian for one of the only two Irish PD libraries, Derek Hyland. His many talents range from importing several games from the continent and also the amazing ability to purposely spell thousands of words wrongly!

NAME: Derek Hyland

AGE: Sixteen

KNOWN ALIASES: The Invisible Coder and Highlander

SO DEREK, WHY DID YOU START A PD LIBRARY?

Mainly because I get all the latest software, and I knew that my library would be the finest ever to grace Irish (and maybe English shores (I'm very modest). Also, I love getting letters (Yes, I'm one of 'those' people).

AND WHAT ELSE DO YOU GET UP TO WITH YOUR CPC?

I am the co-editor of The Bad Mag from the Bad European News Gang as well as writing for the Irish fanzine, *Amstrad Fun*.

AND WHAT OF YOUR MUSICAL PREFERENCES?

I like Dance (or Techno/Rave, call it what you will) and I also like Bob Dylan. I would rather die than listen to heavy metal or rock music (Arrrgggghh!).

(ANOTHER PREDICTABLE QUESTION) WHAT ARE YOUR FAVOURITE PUBLIC DOMAIN PROGRAMS?

I have a lot of favourites, but amongst the top of my list at the moment are: *Crazy Snake*, *Puzznix*, *Atomic Preview*, *Turbo Imploder v1.0*, *Disc 'o' Magic v3.0*, *Crime v1.3*, *Crystal Mission*, *Spots*, *The Prodatron Megademo*.

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HELP WANTED. Does anyone know any passcodes for Titus the Fox (original)? Please ring Alan or Michael on 081 778 6534 anytime between 4-10pm Monday to Sunday. Thank you.

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TARGET RENEGADE on tape for 6128. Help! Contact **Robert, 4b Dorchester Road, Sydling St Nicholas, Dorchester, Dorset DT2 9NU.**

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ALIENS in good condition (disk only 6128), will pay very good price. Phone 0772 865653 after 4pm.

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PRINCE OF PERSIA on disk. Will pay reasonable price, must be boxed, as new and in VGC. Tel 0784 248753 weekdays after 4pm and weekends. Ask for Andrew.

DESPERATELY NEEDED the Amazing Spiderman for the Amstrad 464 tape version. Tel Chris 0744 21847.

'PS HEADINGS PLUS' (a program for headings within Protext) reviewed in issue 79 November 1990 of Amstrad Action. Would be most grateful. Phone Paul 0480 860845. 6128 manual also needed.

MULTIFACE wanted for Amstrad CPC 6128 at reasonable price if possible. Desperate and eagerly awaiting response. Write to **Denver Hughes, 12 Aughtarra Road, Armagh, County Armagh, N. Ireland BT60 4QG Tel: 0861 548319.**

WANTED Football Manager 2. Will swap for Shadow of the Beast, Paperboy 2, Black Tiger or Purple Saturn Day. Tel 0729 840554.

TERMINATOR 2 on disk. Will swap for Hudson Hawk disk. Ring and ask for Ian on 0270 627473.

HELP! We've lost our instructions for Elite on tape. Can anyone lend us theirs for a week or so? **Cliff and Allie (0727) 823997 (St Albans).**

LIVING IN SOFTWARE Wasteland! Need disk software - send your list to me for sales, reasonable prices considered! Also require early issues of AA in good condition, ie intact covers. **A McGachie, 1 Church Lane, Seaton, Nr Uppingham, Rutland LE15 9HR.**

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Assembly Line 3

Believe it or not, Simon's finally given some direction to his machine code series. Apparently, we're on the way to writing a Breakout clone. Only time will tell...

The code

Let's dispense with the 'welcome' pleasantries, and dive straight in. Assemble the following code, call it at &4000, and then read the blah.

```
org &4000
limit &4fff

ld a,1
ld (xpos),a
ld (ypos),a
inc a
ld (xdis),a
ld (ydis),a

mainlp
call &bd19
call locate
ld a,&20
call &bb5a

ld a,(ypos)
dec a
ld hl,ydis
add (hl)
ld (ypos),a
cp 25
call z,ballup
cp 1
call z,balldn
ld a,(xpos)
dec a
ld hl,xdis
add (hl)
ld (xpos),a
cp 40
call z,balllf
cp 1
call z,ballrt

call locate
ld a,&2a
call &bb5a

jp mainlp

xdis
```

If you assemble the code you should, if all goes well, have a little ball (or the star character) bouncing around your screen, with a fun little border flash whenever it hits the edge of the screen. Now, this may not exactly be *Arkanoid*, but the source code for that would be too long, and leave you completely in the dark. But bear with me, because as the issues go passing by, we'll be turning that simple character into a sprite, adding a bat, and a few bricks! Anyway, the code in detail.

That code in full

org &4000:limit &4fff

You should know by now that these are assembly indirections instead of proper assembly instructions, that tell the assembler where to place your code, and where to stop it.

ld a,1:ld (xpos),a:ld (ypos),a

First, we need to define the ball's location as 1,1 on the text screen (top left). This is done with a method known as indirect addressing. You'll find a box on that elsewhere on the page.

inc a:ld (xdis),a:ld (ydis),a

Using the same indirect addressing method, we

```
ballup
call flash
ld a,0
ld (ydis),a
ret

balldn
call flash
ld a,2
ld (ydis),a
ret

balllf
call flash
ld a,0
ld (xdis),a
ret

ballrt
call flash
ld a,2
ld (xdis),a
ret

flash
ld bc,&1a1a
call &bc38
call &bd19
ld bc,&0101
jp &bc38

locate
db &21
ypos
db 0
xpos
db 0
call &bb75
ret
```

Don't look, it's those hexa-decimal people we met at dinner. Too late, they've seen us.

Indirect Addressing

Ever got the feeling that things are getting just a little too complicated? Okay, let's look at indirect addressing. We know how we can load individual registers with values, or the contents of other registers. Well, Z80 code also has the option to treat individual memory locations as registers. To access a memory location as a register, the address (or label representing the

```
org &4000
limit &4fff
write 'balls.bin'

ld a,1
ld (xpos),a
ld (ypos),a
inc a
ld (xdis),a
ld (ydis),a

call &bd19
call locate
```

And this, oh dearly beloved, is what it'll start to look like on your monitor screen.

set the two displacement factors at 2. The reason we've used `inc a` instead of `ld a,2` is that `a` already contains 1, so simply incrementing it by 1 saves time.

.mainlp

So we've arrived at the main part of the program then, with a label for us to loop the program, making the ball move more than one space.

call &bd19

You don't need to know too much about what this call does right now, just take it from me that it smoothes everything out, and slows it to a reasonable speed. We'll be covering what are known as 'frame flybacks' at a later date, when we take a look at printing sprites.

call locate:ld a,&20:call &bb5a

So we locate the text cursor over the ball, and erase it by printing a space, ready to place the new ball at the new position on the screen.

This is a really clever bit

ld a,(ypos):dec a:ld hl,ydis:add (hl):ld (ypos),a

Now we get to the amazing Simon Forrester

address) is placed in brackets. For example, to treat the memory address &8000 as a register, and load its contents into the accumulator, the line would read:

ld a,&8000

And that's all there is to it. With this method, we can even alter the program within itself (as is done here in the locate routine).

Displacement

And now, we are proud to reveal the Simon Forrester Displacement System™. Actually, that's not altogether true. The idea is very old, and runs as follows:

Say, for example, that we have the `x` location of the ball. The displacement byte is the byte representing the direction the ball is travelling, and the amount the `x` location will have to be displaced by. So, to move the ball left, the displacement byte is 0, and for right, it's 2. So if the `x` location was 23, to move the

ball left, simply decrease the value by one, and add the displacement byte, making the `x` value 22. To move it right, we decrease the value by one and add the displacement byte, making the `x` value 24.

It would have been easier to have a displacement byte as either 1 or -1, but it would make things quite difficult to understand from a learning point of view, and would require a whole page of explanation of how 8-bit numbers are structured.

Displacement System™, that you can find an explanation of elsewhere in this article. The actual nitty gritty of this code is simple though. First, we get the `y` position into the accumulator. Next, we decrement it by one. Next we add the displacement byte to it, by pointing to the address of the byte with `hl`, and using the indirect addressing. Finally, we re-store the byte.

Can we have our ball back?

cp 25:call z,ballup:cp 1:call z,balldn

Of course, to stop the ball flying clean off the screen (and probably crashing the program in the process), we check the accumulator (which still holds the `y` position) to see if the ball is at either the top or bottom edge of the screen, and call the appropriate redirection routine if it is.

ld a,(xpos):dec a:ld hl,xdis:add (hl):ld (xpos),a

cp 40:call z,balllf:cp 1:call z,ballrt
These two lines do exactly the same as the last two, only they affect the `x` position instead.

call locate:ld a,&2a:call &bb5a

So now we've adjusted the location bytes accordingly, it's time to display the new ball on the screen!

jp mainlp

And finally, jump back to the point where we're going to erase it again!

.xdis:db 0:.ydis:db 0

It's at this point that we have the two displacement bytes stored and labelled, so they

Flow Of Operation

I really hate to drag you down like this, but if we don't give this whole thing a slightly more theoretical slant, we'll be in spaghetti street by the time we've finished another few episodes, and only one of us will know where the hell they are (and it won't be me, I can tell you). So bingo – it's that dreaded flow of operation part I always seem so keen on.

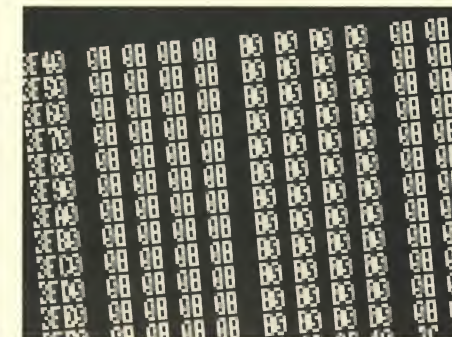
An introduction to pseudo-code – that's what we need. Imagine what it would be like if instead of having to type in all that tedious wibble to get the bouncing ball, we could just talk in plain English. Well, that's what pseudo-code is all about. Let's take a look at our listing the easy way:

- Set up variables
- Erase ball
- Move ball on `y` axis
- If ball=top then direct down and flash
- If ball=bottom then direct up and flash
- Move ball on `x` axis
- If ball=left then direct right and flash
- If ball=right then direct left and flash
- Reprint ball
- Loop to 'Erase ball'

And there we have it – the pseudo code version of that incredibly long and complicated

program. But what does it all mean? Well... When we look at the above 'program', we can see it as a very straight forward set of instructions. Because machine code is a low level language (one not very much like real English and where one command only does one thing, as opposed to a BASIC command which is much more like English and does the equivalent of about fifty machine code instructions), we have to call subroutines for many of the above lines. So instead of that blissfully simple 'direct down' stuff, we have the subroutine `balldn`. And when we say 'and flash', we really mean that at the beginning of the redirection routine, jump to the border flash routine called, surprisingly enough, `flash`. So what used to be a very simple straight flow of program, has now turned into not so much a tree structure, as a small copse.

It's important that you understand the theory behind operation flow – though most coders wouldn't know it by that name, they'll surely agree that it is probably the most important part of understanding machine code. A warning is due here, and that's that we won't be spending any more time on operation flow – take a look through a few BASIC programs for the various branches and subroutines, and get used to the way things flow. Tara!



Pretend to be busy – maybe they'll not bother us. Oh no, they're coming over...

can be addressed very easily elsewhere in the program.

.ballup:call flash:ld a,0:ld (ydis),a:ret
.balldn:call flash:ld a,2:ld (ydis),a:ret

.balllf:call flash:ld a,0:ld (xdis),a:ret
.ballrt:call flash:ld a,2:ld (xdis),a:ret

These are the redirection routines, that alter the displacement bytes when called earlier on. They also call the routine for the border flash.

Another clever bit...

.flash:ld bc,&1a1a:call &bc38:call &bd19:ld bc,&0101:jp &bc38

And here it is – the amazing Border Flash™. The registers `b` and `c` contain the colours the border will flash (but we're turning it to white (&1a or 26), so both registers are the same), and the firmware routine at &bc38 does the biz for us.

.locate:db &21:.ypos:db 0:.xpos:db 0:call &bb75:ret

Oh-er. I'm dreading explaining this. Earlier on, I made reference to a locate routine. Here it is. The call to &bb75 requires the `x` and `y` locations to be in the `h` and `l` registers.

Thinks – why not load them both together with a `ld hl` command? So what's the code for `ld hl`? Ah, &21. Right... Place that into memory, followed by the values to go into the register (two bytes, in this case the location bytes) low byte first. If you don't understand this right now, don't worry – you'll look back after a few more episodes and realise just how easy it is.

And by the time you've got your head round all that, it'll be next month and there'll be more. ●

Till We Meet Again...

Next month we'll be adding a rather groovy bat into the fray, and possibly a few bricks... After that, we'll add a scoring system, and some sound. Wow, huh?

Please bear in mind that this is not supposed to be the hottest *Breakout*-clone since sliced bread, (*Great use of metaphor, Si. – Ed*) merely a vehicle for some machine code techniques. To salvage what's left of my reputation, I'll write a cool *Breakout*-clone for the covertape at some point, but right now, there's no point. Anyway, see ya!

Balrog

Oh no, it's the last ever Balrog! The adventure column will remain, though, but without that nice Balrog chappie.

All good things must come to an end and it is with a tear in the eye that the Balg, after over three years of adventure columns in AA, must wave a clawed goodbye... But never fear because the Balg plans to leave with a bang and not a whimper – leaving behind him the most authoritative breakdown of all clues, reviews and humorous responses ever to grace his column plus all the usual features which made the Balg the greatest.

NEWS

Red Herring

The Balg must once again give a plug to one of the best ever adventure fanzines he's ever seen. Red Herring is superbly presented and jam packed with reviews and interesting articles. Although Red Herring covers all machines, there's enough CPC stuff to make it worth a buy. For more details talk to Marion Taylor on (071) 256 8427 or write to her at 504 Ben Jonson House, Barbican, London EC2Y 8NH.

End of an era

It's sad that the Balrog column is coming to an

end after all this time, but fear not. There'll be an all-new adventure column to replace it.

So for just one month you'll be without your regular dose of adventuring, but it'll be back with a vengeance in AA95.

Adventure Workshop grows!

More news from that hard working chappie, Phil Reynolds, at the Adventure Workshop. Phil has added loads more games to his current stock including *Starship Quest* (the three part sequel to *Magnetic Moon*) at £6 disc only, *The Staff of Power* (£4 disc only), *The Pendant Of Logryn* (£4 CP/M+ only), *The Case Of The Beheaded Smuggler* (£5 disc only), *The Axe Of Kolt* (£6 CP/M+ only), *Venom* (£2 tape, £4 disc), *Shard Of*

Letters

An amazed amster?

I've just read the results of your readership survey on adventuring and am currently laying on the floor in a state of shock. May I take a few lines of your hallowed pages to thank all your wonderful readers that took part in the survey and, of course, special thanks to those who voted for *Helvera – Mistress of the Park* as not only the best text adventure of 1992 but who also gave it the crowning glory of top adventure of all time.

These are heady heights indeed and are certainly far higher levels of achievement than this humble author ever expected to arrive at. So once again, many thanks to you and to all the readers who took part.

Finally, there may just be a few readers who are wondering where they can obtain Helvera as the distributor was missing from the result announcement. It is, of course, available from WoW software (Joan Pancott's HPilg. 78 Radipole

Lane, Weymouth, Dorset DT4 9RS.
Tel: (0305) 784155 Any day – 1pm to 10pm).
Yours sincerely and totally gob-smacked,
Bob Adams
Welwyn Garden City

You may be gob-smacked Bob but you certainly deserved it – in the Balg's not so humble opinion Helvera was the best text adventure of '92. Congratulations again.

PAW problems

All recognise you as the Worlds Premier adventurer. (*Stop creeping. – Balg!*) So I turn to you for help. Where can I get PAW on disc... you are my last hope.

The enforcer Newcastle

Well you could try the original distributors, Gilsoft, on (0446) 732765 but if they don't have it in stock any more you're best bet is to place a free ad in AA.

Role playing games request

Dear Almighty Balrog,
I was going about my usual business of killing a few orcs and maybe the odd hydra at the Fire

Clue sniffing with the Balrog

Cluepot (over the page) comes to you thanks to the following awesome adventurer dudes: Patrick Madders (Newcastle U. Tyne), The Enforcer (Newcastle), Glen & John McFarlane (Troon), Robert Smith (Gwynedd), Philip Carver (Essex) and last but by no means least, Andrew Doyle (Solihull). Thanks also to all contributors who over the years have kept the Balg's cluepot brimming for hints and tips for the needy adventurer.

Mountains, in the Glyphx part of Hythox when I decided to be a bard. I went to the school of Bards and did very well until my final examination – I was given eight moons to find a hobbit sanctuary. (Eating Tooken strange of Littlebead as I hated his letters almost as much as his acquaintances. It was nothing to do with the nine bags of gold and sixty moon pieces he owed me) were an mighty sage informed me that the Balrog lived at the 50th dungeon level of moria (*Well I don't just frequent the 50th – I can be found on the lower levels as well. – Balg*). So I would be grateful if you could tell me of a

A massive great chart

As a parting gesture, here's a list of every adventure ever mentioned by the Balrog.

[illegible]

(Thanks Balg, old chum, we've enjoyed having you with us. – The Team)

Lords & Ladies of Adventure

Iron Lord ● Seabase Delta & Spellbound.
William Huddleston, 1 Millwell Park, Innerleithen,
Borders, Scotland EH44 6JF.

Knight Tyme & Mega Bucks.
Andy Riddings, 10 Berkshire Street,
Chaddesden, Derby DE2 6GQ.

Forest at World's End ● Hitchhiker's Guide
● Jewels of Babylon ● Leather Goddesses &
Message from Andromeda.
Iain McCarthy, The Old School, Church Lane,
Brantham, Manningtree, Essex CO11 1QA.

Castle Blackstar ● Heavy on the Magic ● Indus
Valley ● Never Ending Story & Orb Quest.
Andy Clayton, 29 Portman Road, Scunthorpe,
South Humberside, DN15 8PD. Tel: (0724)
872135 between 6pm and midnight.

Adult II ● Al-Strad ● Antidote ● Atalan
● Bestiary ● Big Top ● Black Fountain ● Black
Knight ● Boggit ● Bored of the Rings
● Boredom ● Can I Cheat Death? ● Case of
the Mixed-Up Shymmer ● Castle Adventure
● Cave Capers ● Caves of the Bew Bews
● Conch ● Crispin Crunchy ● Dick 'ed
● Dungeon ● DAA ● DAAW! ● Detective
● Doomlords ● Escape from Planet of Doom
● Escape from Prison Planet ● Firestone
● Flook ● Forest at World's End ● Gerbil riot of
'67 ● Ghost House ● Grue Knapped ● Heroes
of Kam ● Helvira ● Hobbit ● Hounds of Hell
● House out of town ● Imagination ● Jason
and the Argonauts ● Jewels of Babylon
● Labarinth ● Lighthouse Mystery ● Lost
Scroll ● Magician's Apprentice ● Message
from Andromeda ● Nite Time

● Orb Quest (Pt. 1) ● Orifice from outer space
● Panic beneath the sea (pt. 1) ● Power curse
(Pt. 1) ● Prison Blues ● Quest ● Quest for the
Golden Egg-cup ● Robocide ● Roog ● Rouge
Midget ● Scary Tales ● Seabase Delta
● Souls of Darkon ● Spaced Out ● Spacy
● Star Wreck ● Subunk ● Tealand ● Theseus
(pt. 1) ● Thief's Tale ● Tizpan ● TRD
● Use your loaf ● Videoworld ● Welladay
● Yarkon Blues & Yawn + Help for Quill
programmers.
Simon Avery, 71 Fore St, Chudleigh, Newton
Abbot, South Devon TQ13 0HT.

Hitchhiker's Guide ● Leather Goddesses
● Lurking Horror & Moonmist.
Ken Dean, 63 Elmhurst Avenue, Oulton Broad,
Lowestoft, Suffolk NR32 3AR.

hobbit sanctuary and recommend any good tape
role playing games apart from *Bards Tale* and
Hero Quest.

Michael Orcslayer
Alexandria

Michael, I can recommend the following games
worthy of your good taste: *Rings of Darkness*,
Bloodwych and *Lords of Chaos*. Unfortunately
you're going to have difficulty finding them – your
best bet is to place a small ad in AA. As to
Hobbit Sanctuary's – I've known of a couple in my
time but strangely, within two weeks of their
location reaching the Balg's fair ear, some evil
rampaging monster attacked and ate all the
hobbits! Who could be responsible for this
outrageous behaviour is beyond a naive and
young Balg (toothy grin). (You're all completely
mad, aren't you? – Ed)

Help!

How do you get the second piece of brain in
Monty Python's Flying Circus?
Mr J. Jones, 41 Westmorland Avenue, Newbiggin-
by-the-sea, Northumberland, NE64 6RN.

How do I get the gloves from Joana in the
Famous 5?

Ian Renard, 42 Bodmin Avenue, Macclesfield,
Cheshire SK10 3JU. Tel: (0625) 429109

WANTED: *Leather Goddesses of Phobos*.
Chris Scott, 38 Brocks Hill Drive, Oadby,
Leicester LE2 5RD.

How do you get the fishing net in *Spell
Bound Dizzy*?
Terri Richardson, 8 Exeter Close, North Seaton,
Ashington, Northumberland NE63 9RZ.

WANTED: Booklet for or disc version of
Bards Tale.
Belladonna, 265 Court Road, Nottingham,
London SE9 4TQ.

June 1993 **AMSTRAD ACTION**

WANTED: General help with multi-part games
in **GAC**.

P. Lindley, 1318B High Road, Whetstone,
London N20 9HJ.

WANTED: *Werewolf Simulator* and *Red Moon*.
Chris Parker, 1 Rectory Road, Edgefield,
Norfolk NR24 2RJ.

Cluepot

Famous Five

- Keep paper from sandwiches.
- Make friends with George by buying Ginger
beer at shop with pocket money.
- Matches? Under the bed in the spare room.
- Let George row you to Kirrin Island.
- Tie rope to tree stump to go down hole.
- Pull boat high up on sand.
- Smash cupboard in cabin on ship and take box.
- In Kirrin cottage, to get food, put Julian in
dining room, the rest in the sitting room. Get dick
to turn on wireless. Become Julian, go into the
kitchen, then larder and take all.
- On Kirrin Island to get sticks, eat cake from
larder. Drop crumbs by jackdaw tower. Get
sticks. In shelter light paper then sticks.
- Try hitting people for laughs.

Imagination

- Give the weather map to the woman in the tower.
- Divert the dogs with the chips.
- Enter mole after drinking elixir.
- Freeze milk to get yo-yo.
- Play yo-yo to get the key.

Magnetic Moon

- In port lifeboat bat search pilot's couch then
the storage compartment. Fit oxygen to helmet
the wear helmet.
- To leave the stellar queen... Press button by
airlock, enter airlock, press button, press button
and then jump.
- You need the flashlight on the moon whilst in
the hills.

- By the abandoned freighter don't go aft twice!
- Throw grapnel by freighter until you succeed
then climb rope, then enter port.

The Pawn

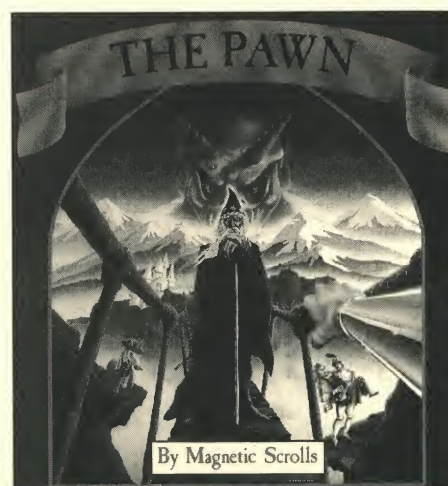
- To get past the large boulder, tie hoe to rake
with shirt, lever boulder with hoe and rake.

Quest for the Golden Egg-cup

- Brooks is the password.
- Never swear.
- God will give you a stone tablet if you hang
around for a bit.
- Don't leave your golden egg lying around,
Thoron will steal it.
- Never drink from Wongo's cauldron.
- Give the ferryman the credit card if he won't
take you across the river.
- Examine everything.
- Interrogate and arrest suspects.

Yarkon Blues

- Bend the panel to reveal a shovel.
- 'TELEPORT' to teleport.
- Press button A then button C or else.
- Hold breath before examining the dead body.
- Fire phaser at case in the museum.
- THE END (sob)



Power Up

CHARTS right here, right now • GAME REVIEWS
pages 44-46 • CHEAT MODE pages 54-57

**And in a packed issue this month, we've got
the more than wonderful *Super Cauldron*, and
the more than disappointing *WrestleMania™*
from the *World™ Wrestling™ Federation™*.**



Tim Norris™

Tim learnt a very important management lesson this
month. He discovered that the best way to control
an unruly staff writer is to swing an aluminium
baseball bat around the office until an entire month's
worth of work lands quickly on his desk. And if you
claim you're just 'warming up for the softball match',
no one seems to complain. So now you know the
truth behind all this 'friendly team' nonsense. (And no
mistake. – Ed)



Simon Forrester™

As well as muttering "Oh-ah yeah" a lot, (Actually, he
does do that rather a lot. – Ed) Simon's just hung
around the office occasionally writing something,
avoiding the softball bat, listening to raucous music
on the office stereo and constantly insisting that he
doesn't wear a wig. He also bet his entire year's
salary (£3.65) on the advice of *Racing BoxForm*,
so he should have been evicted by the time you
read ish 94.



Nick Aspell™

Nick's been wandering around with a slightly vacant
look in his eyes this month. (What's new? – Ed)

A lot of his time has been spent working on a
sister magazine, *Amiga Format*, playing Art Editor
for their live show guide. As well as this, he's been
drawing a lot for *PC Plus*. And he still hasn't booked
a photographer for our new team photos (we're
gonna be in trouble for that).

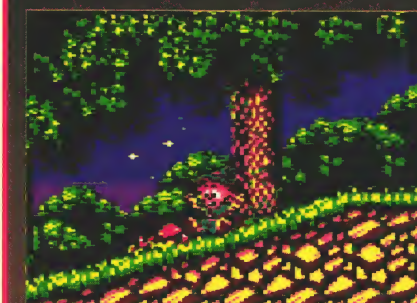
Please mister, can we have our Art Editor back?

The hit parade



- | | |
|----------------------------------|----------------------------------|
| 1 Dizzy: Yolkfolk.....C/Masters | 6 Rick Dangerous 2Kixx |
| 2 The Simpsons.....H/Squad | 7 Postman Pat.....Alternative |
| 3 Terminator 2H/Squad | 8 Fun School 2 Over 8s...H/Squad |
| 4 Fun School 2 6-8 years H/Squad | 9 Hudson Hawk.....H/Squad |
| 5 Magicland DizzyC/Masters | 10 Mini OfficeAlternative |

Reviewed this month



SUPER CAULDRON

Page 44



A PREVIEW OF PREHISTORIK II

Page 45



WWF™ WRESTLEMANIA

Page 46

Super Cauldron

Titus ■ 071 700 2119 ■ £15.99

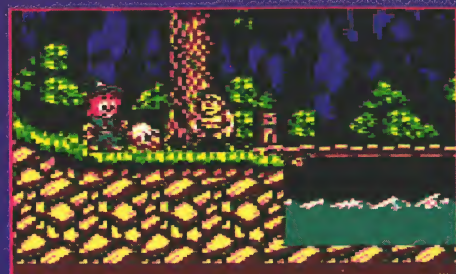
It was bound to happen sooner or later – the strain was bound to get too much for our Simon Forrester. He's written a rhyming review...

Double, double, toil and trouble,
CPCs stick out amongst the rubble,
That's right – the home of this wonderful mag
Was razed to dust by some grisly hag.
After a long and tortured battle,
She flew away with a drawn out cackle,
Having raised the darkest demons of hell,
By loudly reciting the following spell:

You may remember, not long back,
Zap'T' Balls being slightly cack.
Though studded with many a nice effect,
They interfered, so the game was wrecked.
But Elmar's back, effects abound,
Let's hope it gels this time around.
Cauldron 3, yes, more of the same,
So let's get on and review the game.

Now first of all, sorry tape owners,
This game's on disc, but that's a bonus;
'Cos to load the intro and take a peep
Would take forever – you'd fall asleep.
Because foxes talk, and pumpkins fly,
It's very pleasing to the eye,
And unlike Elmar's earlier one,
When you play the game, the effects are gone.

This little witch that moves like Pob,
Comes out of a giant beasties gob,
A little witch with the cutest run,



That looks like a very ugly geezer guarding the bridge. I wonder how we'll get past him.
June 1993 **AMSTRAD ACTION**



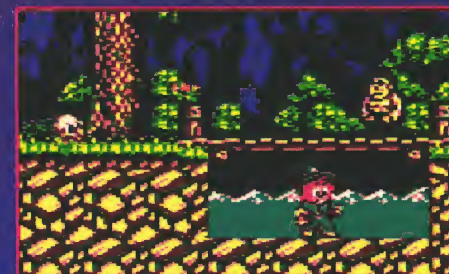
And here we see the traditional witchy mode of transport – sliding on her bum.

Who can slide down hillsides on her bum,
She can run, and jump, and slide, and crawl,
So if you want a gymnast she's got it all.
Okay, with cartwheels she may be licked,
But give her a chance, I mean – who's perfect?

So the little witch runs up this hill,
Reaches the brow – there's an icy chill
And a pumpkin bouncing up and down,
With a lovely noise when it hits the ground.
The cute little witch tries to kill it,
By throwing rocks and stones and grit.
But it just won't die, it's all for nowt;
Instead this smoke comes pouring out!

So dodge the pumpkin, if you can,
And later on there's a crooked man.
He's spitting fire! Ouch! Stop it!
Kill him quick before you cop it.
Owls and vultures, all must die,
When you find a broom and learn to fly,
With death defyingly high dog fights
But with rocks, not bullets, in your sights.

But as well as up, our witch goes down,
To a maze of caverns underground,



Excellent, but I can't help thinking that being under water isn't all that good for us.



At last, witches are beginning to get some good press. She actually looks quite sweet.

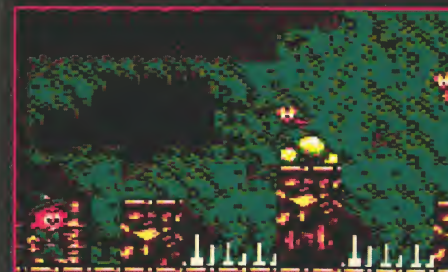


Owls, on the other hand, have always been seen as charming. Except by mice, of course.

To tackle a whole new world of danger,
But when it comes to skill, she's no stranger
To some crafty moves, and a careful shot,
She really uses what she's got
To jump fires, furry slugs and trees
With a grace that makes it look a breeze.

We're climbing chains, dodging folk,
Throwing rocks to kill the bloke,
Jumping over Venus Fly Traps,
Carefully, with no mishaps,
Cos they're following you, open jawed,
Step too close, you're gonna get floored.
Dodging spikes, platforms lift,
Witchy jumps across the rift.

Another level when you fly,
On through the portal in the sky,
And up to fight amongst the clouds,
Where an icy veil of mist enshrouds
The ice balls flying round as well –
Witchy found another spell.
Fire carefully so as not to waste it,
As a few more gruesome things taste it.



Ah, now, spikes, platforms and baddies. We're back on familiar ground here, and no mistake.



That looks like a very handy chain over there. And those wretched owls have gone at last.

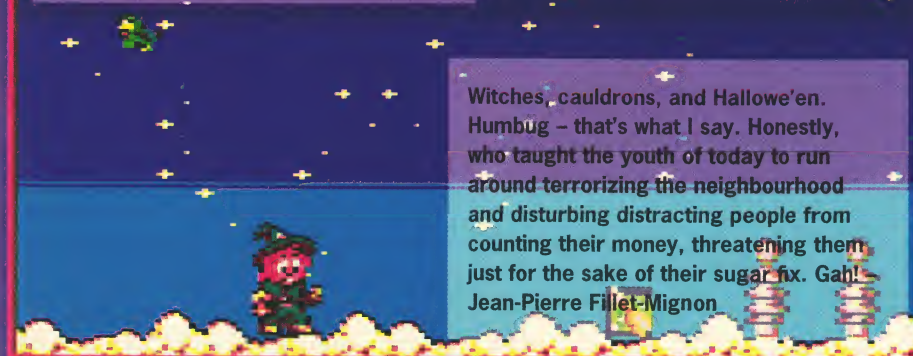
But the gameplay takes another turn,
With some incantations to slash and burn,
And knock some bad guys to the ground
With a lovely screechy zapping sound.
Lots of charms to collect,
Lots of baddies to leave, wrecked.
The magical side has just begun,
And it all helps to add to the fun.

Of course, like all, it's got its faults,
(It's here that all the raving halts)
'Cos if you prefer a shoot'em-up,
Or a puzzle game, this ain't your cup.
But though some bits are a little dull,
Bringing the action to a lull.
You'll appreciate the little break –
Rest your arms for the witches sake.

Cute is slightly overplayed, hence
The atmosphere isn't all that tense,
Thunder and lightning was a nice little touch,
But it really doesn't add that much.
Though don't let this hassle stop you trying,
You'll never feel the thrill of flying,
So get your wallet and stop that crying,
There was never a game more worth buying.

Graphically it's really hot,
There's no effect it hasn't got.

Second Opinion



Witches, cauldrons, and Hallowe'en.
Humbug – that's what I say. Honestly,
who taught the youth of today to run
around terrorizing the neighbourhood
and disturbing distracting people from
counting their money, threatening them
just for the sake of their sugar fix. Gah!
Jean-Pierre Fillet-Mignon

Prehistorik

Now we don't mean to steal *Super Cauldron's* thunder or anything, but you might also be a bit interested to know that Krieger (the programmer) has also just finished yet another blockbustery type mega-game-ish-type thang, *Prehistorik II*. We've seen the preview, and it looks absolutely fab! We should have a full review for you soon.

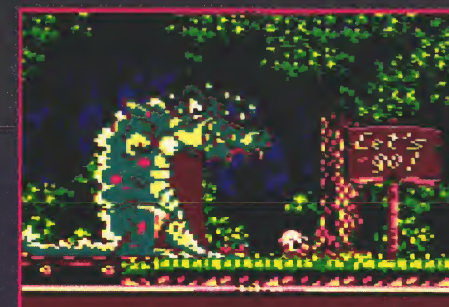


The scrolling – smooth, the movement – fluid,
On our little female druid.
And everything looks kinda cute,
A little too cuddly for you to shoot.
Far be it from me to point the gun,
But fill 'em in – it's really fun.

The music's also really cool,
With a quality that makes you drool
A catchy beat, a healthy swing,
That really complements the thing.
In game effects are brilliant too,
Stereo sounds hitting you
(If you own a Plus, that is,
But even if not, they're still the biz).

And then there's the bit that won't go away;
That eternal problem of good gameplay.
'Cos when all the flashy bits are done,
It's just no good if it's just not fun.
This game is big, I'm telling you.
Each time you play, there's something new.
And you're coming back more and more,
To a game that you will just adore.

You see, *Cauldron One* wasn't all that good,
And *Cauldron Two* a little dud,



It's either a dragon or an exceptionally gymnastic alligator. Answers on a postcard.

And with commercial things the way they are,
Number three could be worse by far
But boys and girls, have no fear,
The wonderful *Super Cauldron's* here,
With games like this we should be proud
To own a CPC – sing aloud!

You know, I'm really good to you,
To poetically write a game review,
That's fun to read and rhyming too,
Gotta go now – Toodle-oo. ●

VERDICT

GRAPHICS

Some of the best graphics I've ever seen on a CPC. The overscan has been put to good use. Everything is smooth, well timed, and fluid.

95%

SONICS

Not as over-bowling as the graphics, but still absolutely incredible. Nothing's overbearing, and it's all used tastefully, and to good effect.

90%

GRAB FACTOR

Feel those little witch hands closing round your throat...

94%

STAYING POWER

...and dragging you ever closer to the monitor. Each time you play, you'll find something new.

96%

I think I'm looking at one of the best games I've ever seen on the CPC. If ever there was a piece of software you should buy, this is it.

RATING 96%

WWF WrestleMania

The Hit Squad ■ 061 832 6633 ■ £3.99

In his capacity as office media-junkie, Tim Norris™ was voted the person most likely to have a satellite dish and to know what WWF™ was all about.

WWF™ is the World Wrestling Federation™. It's American, so the 'World' bit actually means 'North American' (as in baseball's 'World' Series). It's American, so the 'Wrestling' bit actually means 'Wearing outrageous costumes and shouting catch phrases at the top of your voice and wrestling a bit every once in a while'. But The American Costume and Catch phrase Federation™ wouldn't really catch on, would it?

The wrestling chaps all have names like Hulk Hogan™, Mr Perfect™, Ultimate Warrior™, and British Bulldog™. They wear costumes appropriate to their names (sometimes) and they shout stuff like 'the British Bulldog™ is gonna take a bite out of the WWF™™'. You may have gathered from the liberal use of '™s that, as well as being a sporting entertainment, there's a lot of marketing and merchandising associated with the

WWF™. Oh no, it's a licensed game.

It takes several weeks to load, and you'll be disappointed if you wander off for a cuppa and come back expecting it to have loaded, because you need to turn the blighter over.

As the loading proceeds, you choose which wrestler you'd like to be, and get involved in some name-calling with your first opponent. This is pretty much what real WWF™ matches are like. There's endless pre-bout shouting, posturing and abusing of TV commentators to be done before the actual business of beating one another up can begin.

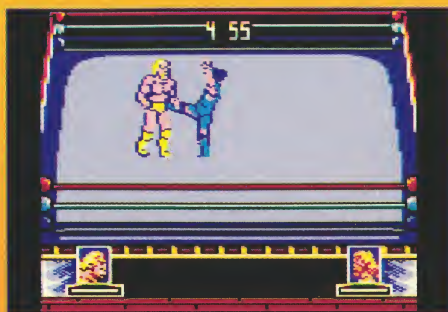
Once the fun does finally begin, what you're actually left with is a rather ordinary beat-'em-up. You have a few wrestling-type moves (flying drop kicks, climbing up onto the posts, that sort of thing) added to the usual punches and kicks of an ordinary beat-'em-up. You get the chance to waggle your joystick in the grapples and you need to stab repeatedly at your fire button if you fall or you won't get up again.

I found that mostly I was reacting to the computer's moves rather than taking control of the play, but perhaps that was just me. Even after I'd been at it for a couple of hours I still felt I was just taking part in a WWF™ display, rather than actually competing. I'd punch and kick at my opponent and then suddenly find that he'd got fed up with that and had got a grip on me. A little joystick icon tells you it's time to get wagging but usually it was all too late (I was still concentrating on pummeling him). The all-important 'jumping on the other guy's head' move was particularly difficult to accomplish.

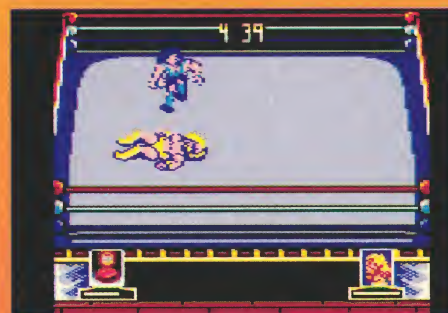
I made the mistake (only once, mind you) of changing my character after a bout. 'Rewind tape to start of side 1 and press fire' wasn't what I wanted to hear and didn't endear the game to me at all. I had to wait for the whole thing to play through from the beginning just to load a few bits of data about my new character. Oh dear.

Graphically it's not up to all that much. The characters look a bit like the real WWF™ chaps but the animation leaves a lot to be desired. It sounds appallingly bad.

It's a bit of a disappointment, really. It has elements of WWF™ that might appeal to devotees of the 'sport'. But it doesn't play all that well – it's not particularly enthralling and ultimately leaves you feeling like you might have been better off not bothering. ●



This is your man Hulk Hogan™ (whose real name is Terry) being kicked in the crutch.



And here he is having his head jumped on. It's not a particularly friendly game, is it?

VERDICT

GRAPHICS

Average at best. The animation of the main sprites leaves quite a lot to be desired.

53%

SONICS

Utterly awful. Not sound FX so much as sad FX.

24%

GRAB FACTOR

Beat-'em-ups always appeal and this is no exception. Beating up computer opponents is fun.

62%

STAYING POWER

If you're a WWF™ fan you might come back for more. If you're not, you probably won't.

45%

Another triumph of licence over substance. Hurrah for accountants.

RATING 43%



(0257)
421915

O.J. SOFTWARE
Fast Friendly Service

(0257)
421915

VISA

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INFINITE LIVES

listed in this magazine and you'll never loose. The MULTIFACE comes with a built-in TOOLKIT that lets you inspect/alter/dump the CPC RAM. It also has its own 8K RAM and 8K ROM. Many top programs were written with the aid of the TOOLKIT and the extra 8K RAM. And do you like the screen shots in this magazine? They are all produced using the MULTIFACE!

When we announced earlier that we were to pull out of the 8-bit market, the surge of interest in the MULTIFACE was such, that we had to make many more. And not just the MULTIFACE - we also have the one and only disassembler,

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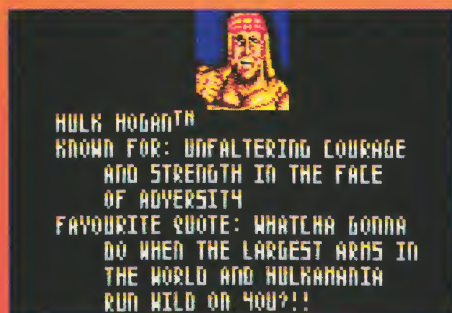
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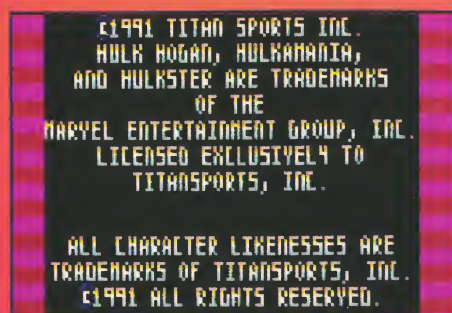
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There's plenty of information about the stars but, if you're a fan, you already know.



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June 1993 AMSTRAD ACTION

Venture Forth

Ever wanted to write your own adventure game in BASIC? Sure you have. Well now's your chance. Tim Norris and Simon Forrester show you the way...

Adventures have come a long way, haven't they? When I got my first computer you pretty much had the choice between taking part in some dodgy Tolkien-esque gobbledegook (thou art mighty, master dwarf, with me come that we might slay us an orc or two, ha-ha-ha) or wander about in space for a bit (set primary throb drive to full overthrust). As time went on, things began to get slowly better and now adventurers can enjoy taking part in thrillers, murder mysteries and a wide variety of other exciting plots as well as all the traditional nonsense.

The healthy growth of adventures has meant that all manner of people have become involved in this mysterious world. Now you don't have to change your name to Gruntfuttock The Unwieldy and talk endlessly about slaying orcs to be a fully-fledged adventurer, nor do you have to wear dodgy spectacles held together with sticking plaster and talk in an irritating nasal voice to be an adventure writer. All you need is a bit of

imagination, a pencil and paper, a working CPC, and us. Hurrah. Over the next few months we're going to take you through the design and programming of a complete adventure (albeit a very small one) without the aid of a safety net, entirely in BASIC.

What's it all about, Alfie?

What you need to start with is a concept – you need to have something for your game actually to be about. It can be anything your little heart desires and the only restriction is that the player has to be able to move about and solve puzzles on their way to some bigger objective. So, for instance, you could write a game about a fish finger factory, but it would only be worth playing if your adventurers were faced with an entertaining assortment of fish finger-related problems to solve on their way to producing the ultimate piscine digit.

Your concept doesn't have to be terrifyingly original – a pseudo-medieval land full of dragons and magic will work fine, if that's what you want – it's just somewhere to set your game.

Our adventure doesn't have to be entertaining or original, just easy to program, so it's going to be about doing the laundry.

Every farce tells a story

Once you have a concept, you need a plot (or at

least the beginnings of one). You could conjure up the most wonderful new world for your adventurers, but if they didn't have anything to do you wouldn't keep them there long.

A plot can be as simple or as complicated as you want. It can be linear (ie only allow the player one way to proceed and solve the problems) or it can be open, allowing them to explore and solve things in their own way in their own time. The only rule here is that it has to be interesting. People have to want to play the game.

We're going to have to start thinking about what's going to happen in our laundry adventure. Obviously there's some washing to be done and we've got to do it. First we'll have to find it, then we'll have to find some means of taking it with us. We'll need some washing powder and some change for the machines. And we'll need to find our way to the launderette.

Start simple

It's not very complicated at this stage, nor is it particularly well thought-out. That's just the way I write – I like to leave myself a bit of leeway so that new ideas can be slotted in as they occur to me. If you prefer, you can write a complex and detailed plot at this stage – it would certainly make the implementation of the game a lot simpler – but I prefer just to have a vague idea of what's happening and let it all find its own way.

And talking of finding our own way, we ought to think about making a map. The bigger your game idea, the bigger and more complex your map will become, and you'll probably find that it grows in stages. It doesn't need to be a work of expert cartography, though, and a vague diagram will probably be all you need.

I 'spect it grow'd

Once you've begun to draw the map, ideas will come to you for puzzles and twists in the plot, and we'll be looking at some basic ideas for those later. You'll probably also find yourself thinking of other locations you'd like your adventurers to explore and if we extend the map to take in the whole of our game world we might end up with something like the diagram below.

What's next?

Next time we'll have a look at room descriptions and maybe get started on some puzzles.

Now it's over to Simon for the techie bit...

The techie bit

Welcome to the programming bit. The artistic version of the map that Tim's done is all very sweet, but to the programmer, it looks like this:

```
01-02-03-04
|
05-06 07 08
| | |
09-10+11-12
| | |
13-14 15 16
```

OK, so it's not as pretty as the first drawing, but it's a lot easier to work with. As you can see, it's four locations by four, making 16 locations in all. The links joining the locations indicate access.

So why do we have a numbered map? Simple really – numbering the locations makes indexing descriptions (so room number one has description number one) really easy. The reason they're in strict order is simple as well. Pick any

location. To travel north, simply subtract four (the grid width) from the room number you're at, and you've got the new room number. To travel south, simply add four, and east and west are achieved by either adding or subtracting one.

The grid is all very well and good in its current form, but that's all it is to a computer – a grid. For a computer program to understand it properly, its features must be in numeric form as well. As it happens, this map can be represented with 16 numbers, one number for each location. How? We use a simple binary (for reasons that'll become clear in a moment) system. With this game, in each direction, the pathway can be in one of four states – access, no access, a locked door, or an unlocked door. So let's number these states:

```
00 No access
01 Locked door
10 Access
11 Unlocked door
```

The reason for the particular order of the states is so that in all conditions, the first binary bit represents access, and the second represents whether there's a door there or not. Now, seeing as a standard 8-bit number contains eight binary bits, it can contain four 2-bit state numbers. So, location 11 has the following byte for its access number:

```
NE SW
10101001 = &A9 = 169
```

Having calculated the access numbers for each location, you can test the map with the simple program below. It starts you at location 1, and allows you to wander freely around the grid, displaying what doors are where, etc, as it goes. This is not a part of the main adventure, merely a testing system for your map, and your data. It is, however, similar in operation to the full program we'll eventually create – it just lacks descriptions, and all other features. It's not difficult to understand either – if you can handle this then

Map Tester

And here's the program to test the map we created this episode. The keys are N, S, E, and W to travel in the compass directions.

```
CAPJ 10-DIM I(16)
DACK 20-FOR a=1 TO 16
CAFE 30-READ b$
DACH 40-b=VAL("&" + b$)
CACE 50-I(a)=b
CAGE 60-NEXT a
CAOI 70-DIM d$(4)
DAIH 80-FOR d=1 TO 4
DACA 90-READ d$(d)
CAEH 100-NEXT d
BACM 110-I=16
CAJC 120-MODE 1
HADP 130-PRINT "Location";STR$(I)
EADF 140-b$=BIN$(I,8)
DAGK 150-FOR d=1 TO 4
EAFJ 160-PRINT d$(d);";";
DADD 170-s=(d-1)*2+1
EADN 180-st$=MID$(b$,s,2)
JAEI 190-IF st$="00" THEN PRINT "No access"
KAEI 200-IF st$="01" THEN PRINT "Locked door"
IAEO 210-IF st$="10" THEN PRINT "Access"
JAEF 220-IF st$="11" THEN PRINT "Open door"
CAIH 230-NEXT d
FAED 240-x$=UPPER$(INKEY$)
JANM 250-IF x$="N" AND I>4 THEN I=I-4:GOTO 120
0
JAPP 260-IF x$="S" AND I<13 THEN I=I+4:GOTO 120
20
JACP 270-IF x$="E" AND I<16 THEN I=I+1:GOTO 120
20
JADN 280-IF x$="W" AND I>1 THEN I=I-1:GOTO 120
0
CAKX 290-GOTO 240
GAAI 300-DATA 28,22,22,02,a8,02,08,08
HAEE 310-DATA a8,12,a9,8a,a0,02,80,80
JABM 320-DATA North,East,West,West
```

you shouldn't have any problems with what's to come in the way of programming.

The descriptions will only be added when we've got a more workable program, which'll appear next month. Until then, try creating your own map and feeding into this program.

Next month, we'll be taking a look at the beginnings of the main program, with a parser (the bit that interprets what you type) and descriptions. ●

Small Is Beautiful

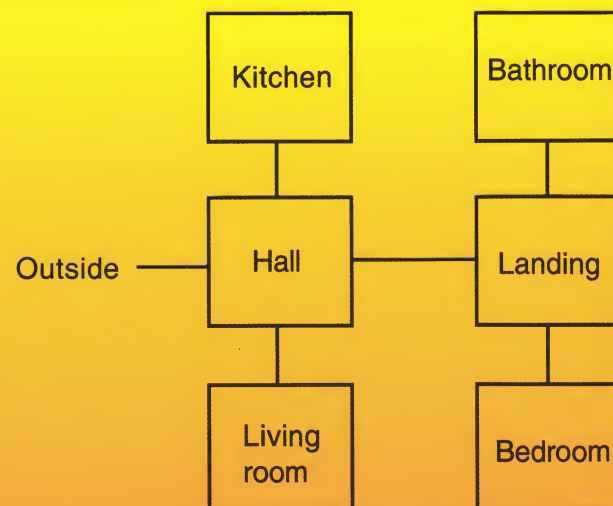
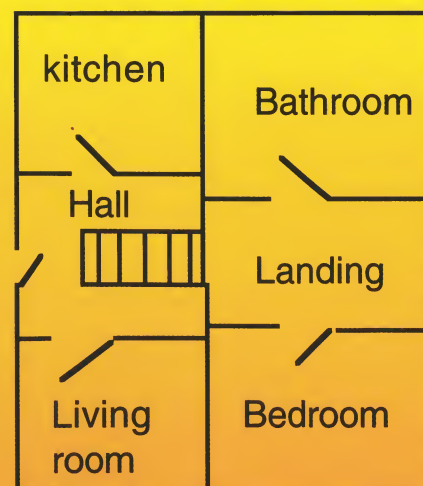
Now, you may be wondering why the map is only sixteen locations big. The answer is simple. We simply don't want to swamp you with a 256 location monster game, and make you lose sight of the actual point of the series, which is technique. The adventure is, however, modular – extra locations can be added easily, by simply scaling up the numbers. If you wish, you could design some monster game, but it's probably better to start off small for now...

I can't find my way home

The whole thing is going to start in the bedroom when the player realises (s)he hasn't got any clean clothes. So what's needed is a plan of the house.

There'll probably be a bathroom so we'll need one of those, and the rest of the house sort of follows.

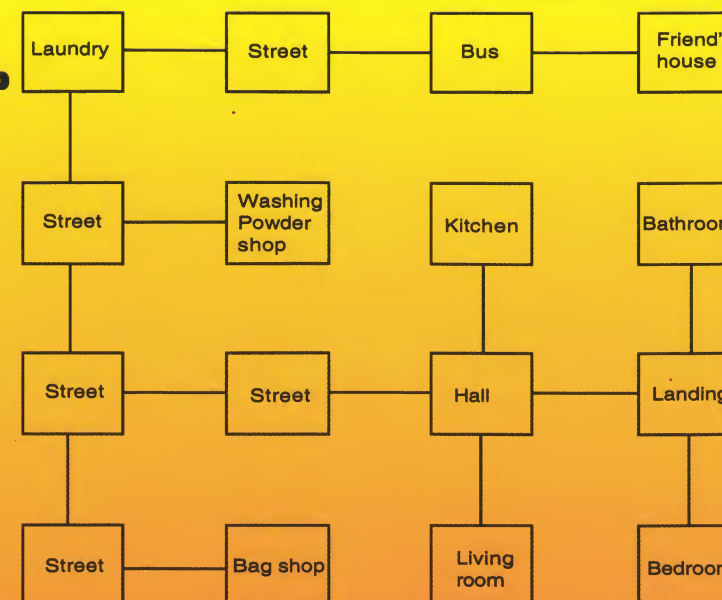
Outside



That's all very well, but it'll take years to draw a whole game world like that. All we really need is

boxes to represent the locations and lines to show how they're connected. Much simpler all round.

A map



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A demand for reviews

What have Dalek Attack, Desert Rats, Indiana Jones - Fate of Atlantis, Liverpool, and Street Fighter II got in common? Well, they are all full-price Amstrad games which appear for sale in recent advertisements that have not been reviewed by Amstrad Action. Please could you tell me whether you will be reviewing these games in the near future or give a reason as to why you have not reviewed them.

Eman Zaman
Aldershot

Don't you take that tone with me, my lad. What is the youth of today coming to?

As I read your list of games, I was able to think of at least one other thing all those games have in common - they haven't actually, in the sense of their being finished and available for review or sale, been released yet. As we go to press, none of them can actually, in the sense that you can exchange money for them, be bought anywhere (the fact that they're advertised for sale doesn't, necessarily, mean anything). As soon as they're finished we'll review them, and not a moment before. So there.

Mr Observant

It may just be me, but when I bought AA84, it cost £2.50, had 80 pages and had a nearly completely different team. What's happened? Did I hibernate for a year, or what?

Letter from Oz

If you want to know where the faulty batch of AA87 without the head cleaner ended up, it was Sydney, Australia.

Used to take ACU till it went out, as I only came across AA the once. But it has appeared again and I'm real chuffed about it as getting hold of game tapes here is a real problem. A bewt magazine and because of your write-up about the Amstrad NC100, (That's the NotePad, short memory fans. - Ed) my wife is as happy as a sand boy with her new word processor, never having used one, or a

computer, before. We are both in our mid 60s, but we like to keep up with the young 'uns.

I particularly liked Wiggler (AA89) and I'm almost addicted to Penguins.

Thanks for a fine magazine - try not to go down the gurgler.

Eric Cox

New South Wales

Ripper, fair dinkum, bung a couple of snags on the barbie, cobber. I think that should just about cover it.

Here are some questions:

- 1 What's happened to AA (including cover)?
- 2 Who produces Lazer Squad, Captain Blood and Iron Lord as I'm chasing these games.
- 3 I've lost track of Dizzy's adventures. I think a list is in order, please.
- 4 Anything interesting happened CPC-wise during my 6 month sleep?
- 5 During my hibernation I've gained a Pre-Computer 2000 - well worth it.

Simon Crabtree
North Allerton

- 1 What do you mean, 'what's happened'? There's still loads of stuff in it (although it's slightly more serious stuff), it's got a groovy covertape, and the cover is (as we've said before) pretty much the same as it always was (keen observers will note that the typeface used for the new logo is exactly the same as the old one). The team has, indeed, changed. I can't work out why these things happen. I was watching Blue Peter the other day and do you know, Val Singleton, Peter Purves and John Noakes were nowhere to be seen. What can have happened to them?
- 2 Lazer Squad was by Blade and might not be very available. Captain Blood was by Infogrames, and is less available. Iron Lord was by Ubi Soft and might be slightly more available.
- 3 Dizzy, Treasure Island Dizzy, Fast Food, Fantasy Island Dizzy, Kwik Snax, Magicland Dizzy, Panic Dizzy, Spellbound Dizzy, Prince Of

The Yolkfolk, Dizzy Down The Rapids, Bubble Dizzy, Crystal Kingdom Dizzy. This list was taken from the feature 'Dizzy: this is your life' in AA87. 4 Yes. A new 32-bit CPC was launched in December with 5Mb RAM (expandable to 32Mb) and a built-in 80Mb hard drive. It was shipped with software that converted all old CPC software to fast-moving 256 colour, with full stereo sound. It was available only to AA readers and, unfortunately, the offer closed on 31 January 1993. Shame you missed it, but at least you've got your Dizzy games to keep you company. 5 Whoop-de-do, I must make a note in my diary.

Mad as a tree

I have been a 6128 owner for six months now but have just one problem: try as I might, I can't find Elite on disc. I've tried many suppliers of software, but to no avail. Please, please can you help. Prior to purchasing my 6128 I owned a variety of other computers (BBC B, C64, etc) and Elite has always been my favourite game.

HELP! HELP!

Locate Elite please!

ON DISC!

Please Help!

HELP PLEASE

Martin Gaskell

Wigan

PS I think AA is absolutely wonderful - so are all of you - Rod's beard was awful. Will that do?

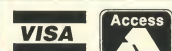
Lawks a lordy, don't some people get excited? Have a sit down and a cup tea. Relax. It's only a game, for heaven's sake. We're trying to get hold of Elite for our Classic Collection (but don't hold your breath).

Put in my place

Can you include an apology to C Hawthorne in the next AA for telling him that his Multiface 2 should be unplugged when playing Lemmings. It is common knowledge (it's in the MF2 manual) that the Multiface 2 can be 'seen' by some software. The Multiface 2 can be switched off so that no software will know it's there.

Press Reset (yellow button). Press stop (red button). Press R and the Multiface 2 will be invisible. Run Lemmings and see for yourself. (Sorry, no time to play. - Ed)

Why did you also say that the Multiface 2 wasn't needed with Lemmings? (Because it's not NEEDED with anything. - Ed) The disc version of Lemmings has a bug (Er, except the disc version of Lemmings. - Ed) and the passwords above



Card holders can order now on: **0462 481166**





Salty old sea dog

My wife owns a 464 and my knowledge of computers is nil. But I do know the sea, and I'm looking for games or simulators on ship pilotage. So far I've had no luck. I've seen programs on other machines but none for the CPC. Can you help?

**John Henderson
Poole**

Hahar, Jim lad, take this black spot to Blind Pugh. Sadly, John, my own knowledge of the sea is limited to a dodgy Robert Newton impression and watching In Which We Serve. There's Silent Service (a submarine sim) and a handful of other war-type games, but nothing really about pilotage. If anyone knows of anything that might do the trick, perhaps they could write in. Ta.

with no success.)

2 The AA89 covertape had a fonts program. Is there any way to get my printer to use these?

**Ian Truesdale
Craigavon**

1 Multiface screen grabs include extra information which makes it difficult for ordinary graphics programs to interpret them. Colourdump 3 will do the job, as would a Multiface decoder program which will knock them into shape and allow you to import them into a graphics package. Robot PD have one that'll do the job, contact them on (0572) 723572.
2 No, sorry, there isn't. They're screen fonts, not printer fonts.

Buying a new one

I've got an Amstrad PCW and a Mega Drive, now all I want is a home computer suitable for good games – I chose the CPC.

1 Which is the best, the 464, 464 Plus, 6128, 6128 Plus, or 664?

2 Is this the last year to buy CPC games?

3 I've looked at adverts and when they say 'discs' do they mean 3" discs? If so, will they work on the PCW?

4 Which CPC has the most games available?

5 Is there a GX4000 console magazine available?

6 Where can I buy a CPC?

**Rahul Gindha
Stirlingshire**

Well, Rahul, it's like this:

1 Well, the best has to be the 6128 Plus, really. It gives you the big memory and disc drive and if you follow our simple upgrade project (AA92) you can add a tape interface as well. If you don't want to do that, then the 6128 will do you fine (most people end up wanting a disc drive, why not buy a machine with one already built in?)

four years. I've bought quite a lot of games in that time (but only the ones that get good reviews in AA). When I first got my CPC I wanted to use it for serious stuff (word processing, screen design) as well as games and I use a Star LC-20 printer to print my stuff out.

It wasn't long before I got into programming as well and I've been building my knowledge of BASIC, creating little programs for my own use. I've written a management program for adventure books, a word processor and an art program. My most recent attempt is a game called Cyborg, with simple graphics, a score board thing at the bottom of the screen and sound effects throughout.

I've had very few problems with the machine that couldn't be sorted out with a trip to the repairers and I think it's a brilliant machine which should definitely be kept alive.

I'm planning to move on to machine code soon and have learnt a lot from BASIC. I want AA to give the newest news on the CPC and lots of advice on problems. I really liked Tasword on the covertape and have used it quite a lot.

**Umair Chaudhry
Banbury**

games for the magazine. I've only just started to learn Z80 machine code (Simon's teaching me – I originally learnt 68000) and I don't like to cheat at games so I have no use for the thing. Sorry.

Printers 'n' Stuff

I have owned my Amstrad 464 for about eight years and in that time I've bought various bits of hardware including a DDI-1 disc drive, a Multiface 2 and, about one month ago, a Seikosha SP1900 plus 9-pin printer.

This is the first printer I've ever owned and I would like you to answer a few questions regarding printing in general.

1 I can save Multiface screens and re-load them but I don't know how to get them printed. Would a program such as Colourdump 3 work on a mono printer? (I've tried loading them into GPaint

completed my final assignment which was laser printed via WordPerfect 5.1. Come to think of it, my class wouldn't have completed their assignments (I helped on several) either.

I recently bought an Olivetti Quaderno – the smallest PC I've ever seen (although it's a bit limited by its 8086 processor). I'm conquering QBASIC and porting ASCII files is a dream, but I defy anyone to take away my CPC.

My CPC is also making me money, the Quaderno has got a long way to go to catch up.

To Campursoft: I'll gladly buy one of your hard drive units when they're available (and when I've got some overtime money) as it'll be the ultimate jewel in an already overlaid crown of what must simply be the best 8-bit home computer ever released (and I used to be a BBC fan).

Special thanks are due to you, AA, for the excellent support to CPC owners everywhere.

Hip, hip hurrah X 3.

**Keith Jamison
Belfast**

A mere youngster

I'm 13 years old and I've owned a CPC6128 for

level five don't work. A solution to the bug was printed in AA85 (Oops. – Ed) and since it's a Multiface POKE, how can you use it if the Multiface is unplugged?

Plugging and unplugging peripherals does your CPC no good at all and should be avoided.

The standard of technical replies in AA has fallen in the last couple of years. This is just one example. Please improve.

**Michael Gerrard
Yeovil**

Yes, Michael, at once. I'm almost completely guilty. In my defence, though, I stand by my assertion that you don't actually NEED a Multiface at all (notwithstanding the bug in Lemmings which I'd completely forgotten) and, in fact, I've never used one for anything other than getting grabs of

Just Do It

Student success

I've had my CPC since 1986 and I originally bought it for serious applications (although I do have 150+ games) such as programming and word processing. This extended to DTP in 1990. To date, my most used discs are Protext and Stop Press. The CPC operating system and file system are a dream.

My faithful old DMP2000 is still chundering out diagrams, drawings and text (What a delightful image. – Ed) even after seven years of abuse and about 70 ribbons.

I've compiled assignments and written applications programs during my university course, even programs that couldn't (not wouldn't) work on a BBC Master. I can proudly boast of over 35 MBytes of information on 3.5" discs.

I've already worn out one 3.5" drive while the CPC's own drive just purrs on, and I've bought add-on ROMware and the brilliant application PCTrans.

Without PCTrans I would never have

Nearly what we wanted

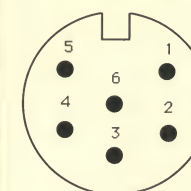
I wonder how many of your readers have a Mega Drive as well as their CPC and, like me, want to use the monitor for both systems. I've managed to work out the connections from the Sega machine and knocked a lead together for about two quid.

All you need is an 8 pin DIN plug, a 6 pin DIN trailing socket, and about a metre of 6-core screened cable.

**John Driver
Swindon**

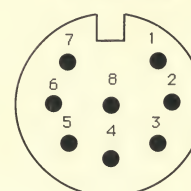
Thanks, John, your letter came in just after we'd printed our request for details of a similar project for the SNES. As yet we've had no reply on that one. (I asked my SNES-owning friends but they didn't know).

**Amstrad CTM 644
(6 pin DIN socket)**



pin 1 – red
pin 2 – green
pin 3 – blue
pin 4 – sync
pin 5 – ground
pin 6 – luminance

**Mega Drive
(8 pin DIN plug)**



pin 1 – ground
pin 2 – n.c.
pin 3 – luminance
pin 4 – red
pin 5 – sync
pin 6 – n.c.
pin 7 – green
pin 8 – blue

2 Er... We have no way of knowing. There will be people around selling games for the CPC for as long as there are people to buy them. Even if all the software developers were to withdraw their support tomorrow there would still be plenty of games available from their back catalogues.
3 Yes, they're 3" discs. No, they won't work on your PCW.
4 Some games won't run on the 464.
5 Good heavens, no.
6 Scour the ads and reader ads in the mag.

Lead need

I was looking through the computer section at my local newsagents, desperately looking for an Amstrad CPC magazine – something which I have done every day since I got my CPC6128 some two years ago, without success. This time, however, what did I spy but an Amstrad Action hidden behind a pile of console mags. It shone like the summer sun through the gaps between Sonic and Mario and with trembling hands I lifted it and paid my £2.95 (which I'd been saving for five years). What an amazing mag, (Thanks, you're pretty amazing yourself. – Ed) full of everything you need to know about the CPC. So I felt that with this huge reservoir of knowledge (And talent. – Ed) you might be able to help me.

No one in Northern Ireland seems to stock the CL1 lead which is needed for an external tape player. If anyone reading this knows anywhere in NI which sells them, please get in touch.

Also, recently some Scottish person wrote in to say that there are computer shops in Scotland. Well we have them in Northern Ireland too. So there.

**Samuel Campbell
Ballymoney**

Astonishingly enough, we have them in England too. Why don't you try contacting some of the English computer suppliers that advertise in the mag?

Psychotherapy winner

I write with much happiness and joy, for I am in love. "In love with whom?" I hear you cry. "In love

with Simon Forrester, the man with more hair than something very hairy." But I am not yet ready to come out of the closet, so I wish to remain anonymous. (But feel free to publish this so Simon feels better – he gets too much stick.) Love and kisses to my hairy honey monster
Loopy Lou
PS Tell Si I would love to be his hairbrush any time – all those tousled curls, grrr...

You are quite clearly mad beyond dreams of insanity. None but the most hopelessly deranged could ever possibly find Simon 'sorry I'm late everyone' Forrester even remotely attractive and we recommend that you seek help at once. Frankly, Lou, we're very worried about you. Oh, and he wears a wig. (No I don't. – Simon.)

Give it some stick

In the April issue there was a small piece in Amscene on the Foot Pedal. It says that it's ideal for driving games and that you can just use the joystick for steering.

Well, instead of using the joystick, there's a device which looks like a steering wheel, acts like a steering wheel and is, indeed, the computerised version of a steering wheel. It has small buttons for the accelerate and brake controls and gear change is obtained by flicking the steering wheel. Used with the Foot Pedal, this would make your driving and flight sims very realistic.

**Stuart McMillan
Glasgow**

I think you're talking about Nigel Mansell's Freewheel from Logic 3. That's the one that doesn't have a stand – you just hold it in the air and move it about. It's expensive (30 quid) and it takes some getting used to, but you're right, it does make things a bit more realistic (in a bizarre 'holding your steering wheel in the air' kind of way).

Can't see the wood...

I've been getting your magazine for a couple of years now and your covertapes have always

loaded okay, But I've had some problems with the March tape.

The game is Steve Davis' Snooker. I tried to look for some instructions in the magazine but couldn't find any.

Can you please print some instructions in your next issue on how to load the game properly.

**Arthur Patching
Ipswich**

It must be that East Anglian mist, Art. On page five of the March ish, there's a big yellow box headed 'How to load your covertape'. Page four is given over entirely to Steve Davis Snooker. The third paragraph tells you everything there is to know about controlling the game and at the end, in VERY big letters, there's a summary of the controls. I'll admit there's a lot of nonsense in there and some pretty dodgy jokes but come on, Arty, have another look and then tell me you still don't understand.

One more time

I am a 464 owner that's in desperate need of your help. I live in Yeovil and I have a problem – my local games shop has closed down, so how do I get games?

**Miss N S Andrews
Yeovil**

Well, Miss N S, you're not alone by any means. This is the question we're most often asked so we've decided to print your letter along with what we consider to be the definitive answer.

Unfortunately, you're probably going to have to get all your games and other software by mail order. It's something not many people like doing, but mostly it's safe. Look through the mag. Look at the adverts. Find a company that sells what you're after. Use your own skill and judgement to decide whether they're any good or not (have they been advertising in the mag for a long time? that sort of thing). Phone them up or write to them. Order some stuff. They'll send it to you.

Sadly, correspondence on the subject of software stockists in your area is now closed. ●

Cheat Mode

And now, for all those of you that don't like playing games for yourself, here's Phil Howard to do it for you.

Seymour Saves The Planet

Lee Rouane has found another great Keypress cheat, and once again managed to save the planet, this time, surprisingly, for Codemasters Seymour Saves The Planet – for infinite lives type CHEATING into the Hi-score table.

Elite

It's a long time since we had any tips for Elite, but it is a great game. Ian Mc Garvey of Dublin has sent us an 'experienced players' guide to the gold edition.

Extra keys Y – Cloaking device on/off (see mission selection)

F – Enter/leave Witch space (only when game is paused).

Extra equipment: ECM Jammer



It's Super Seymour. And he's saving the planet. Hurrah. Pity he spilled his drink.

Cloaking device (see mission selection)

Equipping your ship:

Start by buying a fuel scoop. This is invaluable during interplanetary travel as it enables you to pick up lost cargo in space which can be sold later. It also allows you to refuel your ship free of charge at any sun.

- Next buy better lasers. If you can't afford military lasers then buy the mining variety (don't bother with beam lasers – they over-heat too quickly).
- Then buy a docking computer to help you land on space stations, it also saves time.
- Now buy extra energy unit this is essential for the cloaking device or for extended battles.
- Energy bombs, escape capsules and galactic hyperdrives can then be bought in any order.

Fuel and missiles:

Try to keep your ship fully fueled or ensure that you have enough to jump to another system in an emergency. Try also to have at least 3 missiles but don't use them unless absolutely necessary as most traders and pirates are certain to have ECM systems.

Interplanetary travel:

Try to stay in an area with several planets which can be jumped to without having to refuel first – it may become necessary to escape a battle.

- To jump into witch space, first set the co-ordinates for a nearby planetary system (0.8 light years away if possible but no more than 3.0 light years) and start the countdown. When the countdown reaches between 7 and 4 press DEL now press F once, a beep will sound, unpause the game and engage the cloaking device (if you have one) and you will emerge in witch space.
- NOTE:** be ready to fire when you arrive as there will be either 3 or 4 Thargoid battle ships which will immediately open fire. To leave witch space, simply repeat the procedure.

Missions

I have completed two missions in Elite. The first will only be given if you have a cloaking device, and involves destroying several space stations which have been taken over by the Thargoids.

NOTE: You will have to jump to this system several times to complete it. An ECM Jammer will



The Ed's thinking of taking up golf. At the moment Leaderboard is as close as he gets.

be given to you to help destroy the stations. To destroy them, cloak the ship (Y) and launch all four missiles at the station when it is in range (don't cloak until it's in range as the energy drains very quickly). The station will explode and you must jump to a safe system as the surviving Thargoids will attack as you de-cloak.

Cloaking device

Can be obtained in Galaxy 8 and will be added to your weaponry once you have destroyed a fleet of Asps and Kraits, the asps will vanish and re-appear on the screen. An on screen message will confirm you have the device.

ECM Jammer

Is given at the start of the mission and will be retained for the game. It is only possible to use it if you have the cloaking device. To use it cloak the ship (Y), target and fire your missiles. The targets ECM not operate as long as you remain cloaked. If however you de-cloak before the missile reaches its target the enemys ECM (if it has one) will destroy it.

The second mission is to rescue the population of a space station from an exploding sun. When you arrive in the system you will have lost all your fuel due to a leak. Immediately refuel at the sun as you will not have chance later. Then travel to

the station and dock. Press 2 and a message asking you to rescue them will appear. If you answer Yes you will be given a galactic Hyperdrive which will activate when you press H after exiting the station. You must be quick as the exploding sun will destroy you.

Rewards

The title of ARCHANGEL is given for the first mission and valuable gems for the second.

Sim City

Town planning fans will be extra pleased this month as here are a few more tips for Sim City this time from Donna and Tony Parker of Sheffield.

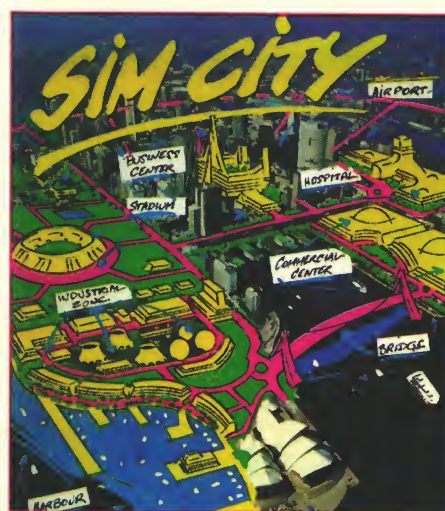
When playing the game at the start try to keep to the village category as it will keep your spending to a minimum. As the game progresses you will gradually work your way up to a city.

It's a good idea to choose your power station first, but opt for Nuclear, if you go for coal, when the city expands the power will short circuit as the residential zones only need half the amount of power as the rest.

Budget

For the Tax percent, keep it at 6-7% until December, then put it up to 20%. In January drop it back down again, this will help keep your cash flow out of the red. If you give the following percentage to be allocated you will find that you have sufficient amounts to stop problems arising. Transport – 90%, Police – 65%, Fire – 50%. You may find that the police and fire departments keep asking for more funds, but they always do, ignore them.

Always remember that if you put taxes up above 7% people will start to move so in the long run you will get less cash.



It's the original and best. Sim City set new standards for keeping people up at night.

Evaluation

You have to keep checking this every 3-4 months. The main thing to watch out for are unemployment, migration and house prices. The danger zone is 20%

Unemployment

Keep it down by placing more industrial zones in your city, only placing commercial zones when it asks for more or when others are completely full and the employment has risen in the industrial zones.

Migration

When the figures get to the minus side of 200, start to place more residential zones as this will help reduce the figures as more people move in. The migration may go up as you put the taxes up and people move out, but don't worry they will move back after January.

House prices

You can keep house prices down by demolishing trees near to any of the zones, and also by Not placing them near to water. Keep them away from Power stations as this causes pollution, and keeping them away from Industrial zones keeps the prices down. If your house prices do not rise over 20% and you have followed the instructions, don't worry as it is probably the time of year they will start to go down soon.

Remember to be patient, it takes a lot of time and waiting at first, but it will pay off in the end. Don't build everything all at once as you will soon run out of capital.

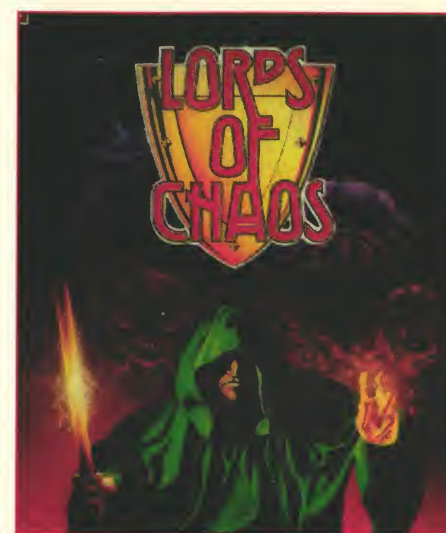
World Class Leaderboard

Stuart Mainland of Ayr has a tip to see you do a little better for your handicap on World Class Leaderboard.

Load course four (Gauntlet country club) and select the kids level (who does anything else?) when you get to the second hole do not move the cursor, select the 7 iron off the tee and hit the ball with maximum power and maximum slice. You should get a hole in one.

Auf Wiedersehen Monty

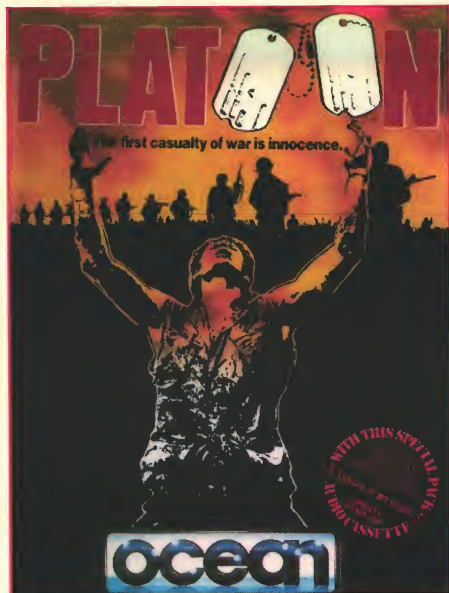
Auf Wiedersehen Monty has been sorted out by Angela Allum of Bracknell in the shape of a map and accompanying tips. There's no



No wonder he can't see anything, he's got that huge green cowl over his eyes. Tch!

space for the map this month Angela so well see if it will fit later on, in the mean time here are the tips. Angela suggests that may be a built in cheat POKE 800,201 prior to loading, but doesn't say what happens (let me know!).

- There's no one way to solve this game, it means a lot of to-ing and fro-ing and planning, once you've had fun exploring it.
- Monty can travel upside down, you may need to press jump sometimes or just UP. When jumping gaps you have to experiment, Monty may make long or short jumps depending where you are.
- Don't expect Monty to be sensible after he's had a drink, his actions are a bit random, wait until he gets over it. There's a bottle in Italy above Rome which could cause a disaster unless you are planning to go to Rome
- Some ways are one way only, some you can go both ways. If you see a passage leading off the screen then it's worth exploring, that's the way to get the plant pot. Remember, Monty's a Mole – he can burrow through some of the reddish earth, that's how you get to Praha, where the Bacon has to go.
- You can only carry four things at once, this means you have to plan what to do. The wine can be collected at Brest and taken to Dortmund, the tools collected and the lift fixed (jump over it to prevent being taken for a ride), both without air tickets.
- The 'naughty airports' in Praha and Yugoslavia will take ALL your tickets and send you nowhere if you try to use them. There's a good airport in Yugoslavia (just under Zagreb) which will send you to Rome. From Olympus you can fly to Bern, from Moledavia to Copenhagen.
- You only need to go to Sweden once, so you can use the ticket from there and bring the steering wheel for Monaco. Once you are in Antwerp or Nancy you can only get back to/ past Paris by flying (if you want to get back to Nantes,



In Oliver Stone films do you find you don't really care about any of the characters? I do.

Dijon, Spain, etc.) from Amsterdam or Spain.

- From Bonn you fly to West Berlin then walk across to East. The only ticket in this block is in East Germany. East Berlin sends you to Yugoslavia. That's the only way to get from France and Germany to Italy, Yugoslavia and Greece. Take two tickets when you go to Berlin.
- You can't go UP from Rome or up to Bern (so don't rely on going down to get a ticket from below). Also you can't get Up from Staying Greece to Moledavia.

- The pot plant has to be taken to Amsterdam, touch the little man in the water he will exchange it for a tulip. The Mona lisa has to be taken to the 2nd ltsa Daboss (left from the 1st one). Touch the moving yellow grill. The football must be taken to Juventus.

Lords Of Chaos

**£20
winner**

Martin Grimley (and his sister) of Darvel in Scotland have sent in some tips for the mystical game *Lords of Chaos*. First he suggests that you type in Graham Smith's cheat from AA66, not a bad idea.

Level 1

- The basic tip for this level is to corner Torquemada at the Giant spider room with Gold Dragons and Vampires.
- I usually cast up pixies and steeds for all plus one for mr Wiz. Then take everything in the house and exit next turn.
- Don't re-close doors in the starting house as he probably knows you're there anyway!
- Look about the Big map for open doors on your second turn to locate Torquey.
- Over the next few turns cast up dragons and vampires to counter the two he casts up.

June 1993 **AMSTRAD ACTION**

- Torquemada doesn't have any dragons, but he will hide all the dragon herb from you. He hates the sight of your dragons and will make his way to the giant spider room.
- Look out for centaurs as most of these computer wizards like them.
- Steal his protection potions with an un-mounted pixie armed with vials, this really ticks Torquey off!
- One house has a chest, the other has potions and weapons. Look out for chests in Magic Wood and Shadow Wood. Never stay out in the open in case and independant giant spider sees you.
- When the portal appears place an undead on it and watch the spiders head for it.
- It helps if you look around for keys to open the chests for maximum experience at the end.
- Don't spend action points looking for door keys, L8 magic Fire on the trees around the walls destroys all.

Levels 2 and 3 (less exciting, harder to explain)

- Cast up three gryphons and some creatures to carry things that can also ride mounts.
- Clear your starting square and again look for open doors and centaurs.
- Sometimes you will encounter his L3 Dwarf which you can easily sort out. A goblin, demon giant bat are usually cast up after this, these can also be easily wiped out by magic bolts L8,7,6,5 etc. along with magic lightning.
- He never casts up steeds so he will be easy to kill, although he does drink a protection vial.
- On looking at the map you will find 3 adjacent corridors with 2 doors each. The middle one has nothing, but the outer ones have independant spectres and components.
- Carrying on up you'll see a room with lava. This is locked as is the chest inside where a demon awaits you.

- A locked room above a starting point houses 2 vampires and chests.
- Be careful of dungeon things, as they are invisible and always start in rooms. They are mean and strong but can't hit undead, and most certainly hate magic bolt L8.

- You can corner Elbo Smogg really easily in a corridor next to his starting point (small corridor next to the right of the lava flow). It has 3 zombies which are a bit difficult if you forget they are magical. They can easily be killed.

Level 3 (the shortest)

- The lair is all corridors and traps. Watch out for the stupid centaurs and goblins. The smallest room above your starting point has weapons. To avoid the traps here's what to do:
 - 1) Stay away from the middle squares in the corridors with the candles on the corners.
 - 2) Don't leave anything valuable on the table.
 - 3) Across the chasm a giant and a troll are both

- armed with magic bows, subvert one and use the bow to kill the other.
- 4) If you manage to get outside his complex (escaping through the wood room etc.) watch out for his vampires and harpies.
- 5) A room in the maze has 3 door through 3 separate walls, these contain more zombies.
- 6) The massive room in the centre with 4 portals is where Ragaril starts. Don't think you can just teleport in there and start fighting, he has lots of nasty wiz-killing tricks, so cast up a magic shield and then try (if you dare!).
- 7) The room with the table has 3 doors, one has a spectre, one has a chest, and the other sometimes changes. The chest is in the middle, but you'll need a key to open it.
- 8) To collect the gold inside the green fire, go in with your wiz on a steed, take it and teleport out.
- 9) Watch out for portals that let his denizens come to you. Pixies are sometimes sent through.
- 10) You can only set the wood room on fire, and 'Blob&vine don't work (?)
- Pixies don't always do what you expect but you always lose action points.

Platoon

Platoon is a game that cheats are always being requested for, probably because it's so difficult! Happy to oblige is Paul Williams from Broomhall who has done one of his complete pokes for the game, the only problem is that you will need a multiface to be able to use them.

Part 1 - Choose your man.

Address	Poke	Effect
man 1		
9E00	09	9 grenades
9E01	90	144 ammo
9E02	00	resets lives
man 2		
9E03	09	9 grenades
9E04	90	144 ammo
9E05	00	resets lives
man 3		
9E06	09	9 grenades
9E07	90	144 ammo
9E08	00	resets lives
man 4		
9E09	09	9 grenades
9E0A	90	144 ammo
9E0B	00	resets lives
man 5		
9E0C	09	9 grenades
9E0D	90	144 ammo

9EOE	00	resets lives
0099	FF	Allows 255 grenades in previous
009D	FF	Allows 255 ammo in previous
1071	00	Inf Morale
135A	00	Inf lives
120C	00	Leaves you with man 1
1256	00	Stops 'Killed in action' on menu

Part 2 Tunnel

0BE4	00	Inf lives
04DC	00	Inf morale

Part 3 Bunker

9E16	00	Flares=0 loads next level
------	----	---------------------------

Part 4 Jungle

100D	00	Inf lives
161f	00	Inf morale
9E00	FF	255 grenades
030B	09	9 mins
030C	59	59 seconds

Quattro

How about a POKE listing for *Quattro*, then?

FAM0 1.'.'2.Quattro.Packs
 NAME 2.'.'Quattro.Fantastic.&.Quattro.Sports
 LAKN 3.'.'The.games.which.can.be.poked.and
 MAOI 4.'.'which.derive.benefit.have.been.done
 AAMH 5.'.'
 KAOI 6.'.'Pro.Golf.has.also.been.poked
 AAOH 7.'.'
 EAJF 8.'.'by.ANDY.PRICE



My hat, it's a pink worm! Love it or hate it, you've certainly got it. It was on a covertape.

The Multiface way

The (t)s and (d)s before the address indicate whether the poke was written for a tape or disk game (they might work on both, its worth a try).

Here's a quick guide to using those Multiface POKES:

- a) Load the game as normal.
- b) Press the RED button on the MULTIFACE.
- c) Press 'T' for tool.

- d) Press '*' to select the code.
- e) Press 'H' for HEXADECIMAL input.
- f) Press 'SPACE' for input.
- g) Type in the ADDRESS (4 characters ie 3A7C)
- h) Type in the POKE (2 characters ie. A7)
- i) Press 'RETURN'
- j) If there is more than one poke goto (f)
- k) Press 'ESC' back to the menu.
- l) Press 'R' return to the game.

AAAI 9.'.'
 BBAB 10.MODE.1:PRINT"...Quattro.Fantastic.&.Quattro.Sports"
 LADE 20.LOCATE.11,2:PRINT"Also,Pro.Golf.Sim!"
 IAFO 30.LOCATE.14,4:PRINT"by.ANDY.PRICE"
 OAHJ 40.LOCATE.10,7:PRINT"1.Fruit.Machine.(Fantastic)"
 PACA 50.LOCATE.10,9:PRINT"2.Pro.Ski.Simulator.(Sports)"
 PAPH 55.LOCATE.10,11:PRINT"3.Pro.Golf.Sim.(original.game)"
 GCBI 60.LOCATE.1,23:PRINT"I.would.poke.as.many.new.games.as.poss":PRINT"IF.only.I.could.get.them.from.someone.....(Hint.AA)"
 CBMJ 65.LOCATE.1,18:PRINT"The.other.games.weren't.worth.poking"
 IAPM 70.LOCATE.10,13:INPUT"Option>.",n
 KAF0 80.ON.n.GOTO.100,400,800::PRINT.CHR\$(7):GOTO.70
 FAHN 100.'.'Fruit.Machine
 EAOM 110.DATA.2a,30,bd,e5
 EAEM 120.DATA.ac,e1,22,2c
 EALM 130.DATA.be,ad,21,37
 EAFN 140.DATA.bd,3e,c3,77
 EAEI 150.DATA.23,3e,23,77
 EAHK 160.DATA.3e,be,23,77
 EAFD 170.DATA.21,40,00,e3
 EAMF 180.DATA.11,00,b0,00
 EAOP 190.DATA.c3,4a,3a,af
 EACK 200.DATA.32,3f,73,ee
 EAOM 210.DATA.41,ee,50,cf
 DACP 220.DATA.00,00,00,00
 FADK 230.DATA.ff,ff,ff,ff
 DAMI 240.RESTORE.110
 FAHN 250.FOR.x=&BE00.T0.&BE34
 FAFJ 260.READ.a\$a:VAL("&"a\$a)
 HAFJ 270.POKE.x,a:chk=chk+a:NEXT
 GACC 280.IF.chk(>&168A.THEN.310
 FAKF 290.MEMORY.&2FFF:LOAD"
 CAMP 300.CALL.&BE00
 HAFJ 310.PRINT"Error.in.poke"
 CADN 400.'PRO.SKI
 FAJH 410.DATA.F3,DD,21,00,BF,11
 FACH 420.DATA.47,00,CD,67,BB,21
 FADJ 430.DATA.2C,BE,22,44,BF,C3
 FAHF 440.DATA.00,BF,21,40,00,E5
 FAEI 450.DATA.21,00,BB,E5,C3,E9
 FAAG 460.DATA.3A,3E,45,32,4B,00
 FACH 470.DATA.3E,99,32,4E,00,F3
 FAPG 480.DATA.F1,C9,AF,21,00,00
 FABK 490.DATA.22,EC,7C,22,EE,7C
 FAFI 500.DATA.22,CF,7C,22,D1,7C
 FAFI 510.DATA.22,C1,7C,22,DE,7C
 FAHI 520.DATA.C3,AB,7B,4A,41,59
 DAFJ 525.RESTORE.410
 FAJD 530.MEMORY.&5000:LOAD"
 FAHI 540.MODE.1:POKE.&3A76,&C3

DAKN 550.POKE.&3A77,&1F
 DAMO 560.POKE.&3A78,&BE
 DACN 570.POKE.&3B22,&4B
 FACF 580.FOR.I=&BE00.T0.&BE47
 FAFE 590.READ.a\$a:VAL("&"a\$a)
 FANL 600.POKE.I,a:S=S+A:NEXT
 GAHI 610.IF.S=7940.THEN.CALL.&BE14
 FAAN 620.PRINT"DATA.ERROR!!!"
 EAEN 800.DATA.2a,30,bd,e5
 EAPM 810.DATA.ac,e1,22,a9
 EABN 820.DATA.be,ad,21,37
 EALN 830.DATA.bd,3e,c3,77
 EAJH 840.DATA.23,3e,a3,77
 EANK 850.DATA.3e,be,23,77
 EALD 860.DATA.21,40,00,e3
 EADC 870.DATA.11,00,b0,00
 EAFN 880.DATA.c3,4a,3a,3e
 EAMH 890.DATA.18,32,7a,4c
 EAAG 900.DATA.cf,00,00,00
 DAGJ 910.RESTORE.800
 FAFJ 920.FOR.x=&BE00.T0.&BEAB
 FADK 930.READ.a\$a:VAL("&"a\$a)
 GAPH 940.POKE.x,a:y=y+a:NEXT
 FAEN 950.IF.y(>&10D9.THEN.980
 FABK 960.MEMORY.&2FFF:LOAD"
 DABB 970.CALL.&BE00
 HAIL 980.PRINT"Error.in.cheat"

Wriggler

HAAI 1.'...'WRIGGLER.(tape.23).CHEAT
 LALK 2.'255.lives.AND.permanant.Ant.Spray
 FAFM 3.'...'By.PAUL.HORNSEY
 AALH 4.'.'
 HAJJ 10.DATA.3E,AD,32,55,87,3E,00,32,56,87
 HAJK 20.DATA.CD,10,81,3E,BA,32,4D,00,3E,00
 HAJC 30.DATA.32,4E,00,C3,40,00,3E,FF,32,08
 HAFJ 40.DATA.81,3E,34,32,01,A6,32,1A,A6,3E
 FAAG 45.DATA.1D,32,D7,93,C3,D2,80
 GAMM 50.t=0:s=&A0:FOR.c=s.T0.&CE
 HAEK 60.READ.p\$p:VAL("&"p\$p):t=t+x
 HAGH 70.POKE.c,x:NEXT:MEMORY.&7000
 EADP 80.IF.t(>4125.THEN.120
 BBDB 90.MODE.2:PRINT"WRIGGLER.(tape.23).CHEAT"
 ...-(BY.Paul.Hornsey.)-"
 CBHH 100.PRINT"<Enter.(tape.23).then.load.Wr
 iggler.as.normal.)"
 FAED 110.LOAD"MENU":CALL.s
 GAAG 120.PRINT"ERROR.in.DATA!"

And that's yer lot. Send all your cheaty stuff to:
Cheat Mode, Amstrad Action, 30 Monmouth Street, Bath, BA1 2BW.

We might even bung you a few quid for it. ●

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• **And another thing** Why do you always leave this room in such a mess? Can't you tidy up once in a while?

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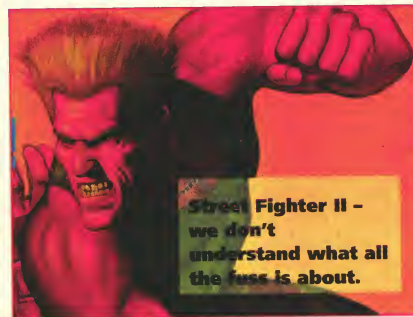
Next Month

At all good newsagents...

Ice Ages...

Dinosaurs evolve and die. Majestic plateaus of ice rise, and melt under the solar glare of the harsh nuclear sun. Aeons pass. Street Fighter II still entirely fails to arrive.

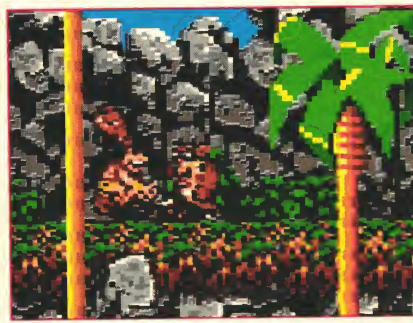
Or does it? The last we heard was that it was nearly ready and that we'd have a review copy 'soon'. Don't give up.



Street Fighter II -
we don't
understand what all
the fuss is about.

Prehistoric...

Elmar returns once more, with the console quality Prehistorik II. We've already seen a preview version and it looks nearly impossible - we would never in our wildest dreams have believed we'd see parallax scrolling on a CPC. Not with a decent game attached, anyway...



Who are you, anyway?

It's time we had a really good rummage around in your personal life and found out exactly who you are and what you want. What we need is a Reader Survey.

Everything we ever wanted to know about our readers but were afraid to ask...

PP QUESTIONNAIRE

Answer All

We would like you to tell us everything and then perhaps some more

What is your name? Yes ☐ No ☐ Where's my blue pen? Yes ☐ No ☐ Do you own a hamster? Yes ☐ No ☐ Who directed the film, Lawrence Of Arabia? What colour is your hair? When did you last eat fish? What is your name? Yes ☐ No ☐ Where's my blue pen? Do you own a hamster? Yes ☐ No ☐ Who directed the film, Lawrence Of Arabia? What colour is your hair? What is your name? Yes ☐ No ☐ Do you own a hamster? Yes ☐ No ☐ Where's my blue pen? What is your name? Yes ☐ No ☐ Do you own a hamster? Yes ☐ No ☐ Where's my blue pen?

Re-releases...

And, just because we love you so much, we'll also be taking a look at two hot new re-releases (ahem), *Darkman* and *Skull & Crossbones* from Hit Squad.

Are we lovely, or what?



For the poverty stricken...
More free software reviewed in the ever-popular Public Image column.

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More of that Technical Forum-type stuff.

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More of that Venture Forth stuff. Delve deeper into that adventure-writing thang.

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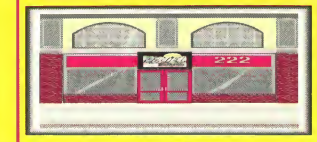
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